

American Forests *and* Forest Life



October, 1926

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ADEQUATE FOREST FIRE PROTECTION by federal, state, and other agencies, individually and in co-operation; the REFORESTATION OF DENUDED LANDS, chiefly valuable for timber production or the protection of stream-flow; more extensive PLANTING OF TREES by individuals, companies, municipalities, states and the federal government; the ELIMINATION OF WASTE in the manufacture and consumption of lumber and forest products; the advancement of SOUND REMEDIAL FOREST LEGISLATION.

The ESTABLISHMENT OF NATIONAL AND STATE FORESTS where local and national interests show them to be desirable; the CONSERVATIVE MANAGEMENT OF PUBLIC AND PRIVATE FORESTS so that they may best serve the permanent needs of our citizens; the development of COMMUNITY FORESTS.

FOREST RECREATION as a growing need in the social development of the nation; the PROTECTION OF FISH AND GAME and other forms of wild life, under sound game laws; the ESTABLISHMENT OF FEDERAL AND STATE GAME PRESERVES and public shooting grounds; STATE AND NATIONAL PARKS and monuments where needed, to protect and perpetuate forest areas and objects of outstanding value; the conservation of America's WILD FLORA and FAUNA.

The EDUCATION OF THE PUBLIC, especially school children, in respect to our forests and our forest needs; a more aggressive policy of RESEARCH AND EDUCATIONAL EXTENSION in the science of forest production, management, and utilization, by the nation, individual states, and agricultural colleges; reforms in present methods of FOREST TAXATION, to the end that timber may be fairly taxed and the growing of timber crops increased.

Entered as second-class matter at the Post-office at Washington, D. C., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided in Section 1103, Act of October 3, 1917, authorized July 10, 1918. Additional entry at Baltimore, Md., authorized July 23, 1925.

Member A. B. C.

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AMERICAN FORESTS AND FOREST LIFE

The Magazine of The American Forestry Association

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Vol. 32

OCTOBER, 1926

No. 394

Published monthly—35 cents a copy—\$4.00 a year.

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AMERICAN FORESTS AND FOREST LIFE invites contributions in the form of popular articles, stories and photographs dealing with trees, forests, reforestation, lumbering, wild life, hunting and fishing, exploration or any of the many other activities which forests and trees typify. Its pages are open to a free discussion of forest questions which in the judgment of the editor will be of value in promoting public knowledge of our forests and their use. Signed articles published in the magazine do not necessarily reflect the views of the Association. Manuscripts must be accompanied by return postage. Editorial and Publication Office, The Lenox Building, 1523 L Street, Washington, D. C.



Those Woods

By
Emily K. Baker Dale

Photograph by Andrew P. Hill

Those woods---Ah hush! The sifting twilight falls;
The broody dusk in yearning calmness sits;
The night steals forth from underneath low boughs
And makes the far dim stars to watch---and watch.
Those woods---! Ah see them---hopeful, solemn, still.
They, earnest, wait the freedom from their bonds.
Their fibers thrill with strange familiar dreams
Of time's first hours when everything was good.
In peace they stand. Their groans are lulled to rest.
All night they sleep. All night the stars keep guard,

At last the stillness moves---expectant, stirs.
The slumbering sound, disturbed, draws gentle breath;
The stars together hymn; sound creeps abroad,
Till one by one in jubilation the trees awake.
Half shuddering in her trailing robes of mist
The dawn climbs singing up the hill of day,
And close behind with strong majestic tread
Behold the prophet of creation---light.
Then looming from soft restings of the dark
With gentle power, close phalanxed, stand---those woods!

AMERICAN FORESTS

VOL. 32

OCTOBER, 1926

No. 394



To Whom Does American Wild Life Belong?



By HENRY R. CAREY

"CHILDREN," says Bernard Shaw, "should be hunted or shot during certain months of the year, as they would then be fed and preserved by the sportsman of the country as generously and carefully as pheasants now are; and the survivors would make a much better nation than our present slum products."

Thus in his inimitable way Shaw portrays to us in one sentence the "pheasant worship" which has led to the destruction of much of the wild life of England, and saddened the last days of W. H. Hudson. Not long ago it was the fashion in England to call all birds which threatened the lives of the pheasants "vermin," and the beautiful eagles, hawks, and herons of England were decimated as a result of this purely arbitrary classification with the fleas. Hudson tells us that the game-keepers shot them all down. No hawk larger than a kestrel now remains on the Downs. The raven is rarely seen. The great bustard remains only as a place-name. The eagle is a memory. Even the graceful fox, protected by the wealthy English lords of the hunt, is being killed secretly by the game-keepers, to make room for the conquering pheasant in his millions. Thus have hunting men destroyed the wild nature of England as it was loved by Hudson, Gilbert White, and millions of others who believed in giving every living thing a fair chance to live.

Is history repeating itself in the United States? America is only a step or two behind England. This is due, not to lack of initiative, but to the youth of the nation, and the size of the spaces to be made void. Many hunters have adopted a senseless policy of wholesale slaughter of everything not considered game. Whether our wild

life is to be preserved in anything like its original balance thus depends upon a race between enlightened education on one side and the game-worshippers and powder men on the other. Last year a campaign to exterminate all the crows was squelched just in time. This year the plan of the "sportsmen" is to kill off all the hawks. In neither case is the economic usefulness of the species considered. The governing force is the momentary interest of a small minority of selfish men. It is the history of England, on a larger scale, all over again.

Even some students of biology are unperturbed by this attempt at wholesale slaughter, first of one animal, then of another. Their indifference to the killing off of all species of quadrupeds and birds not called "game" is excused by a further indifference as to the maintenance of nature as she is, as far as possible unchanged by man's profane hand. In a word, they do not "believe in," or they "do not believe in maintaining," the "Balance of Nature."

But the existence of a balance of nature—the interdependence of the various animals and plants—is as much an accepted fact as the laws of gravity. It exists whether it is "believed in" or not. It is the most self-evident of all the principles announced and illustrated by Darwin, and it is a conception inseparable from that of the "Survival of the fittest." So far, the balance has been modified, but not destroyed. What remains is well worth preserving.

One of Darwin's classical illustrations shows the dependence of the red clover crop in England on an adequate supply of owls, hawks, and other mouse-killing animals. If these predacious creatures disappear, mice become so numerous as to kill off all the humble bees,

on which the clover depends for fertilization. The abundance of clover in a district may, therefore, depend upon the number of owls and hawks!

There is another class of persons, who, admitting that there is a balance or interdependence of Nature, apparently see no reason why it should not be completely upset. Such people, unfortunately for themselves, are forced into one of two logical positions. They must either face extermination callously, maintaining that there is no reason why a wholesale slaughter of animal life, without rhyme or reason, should not denude the world, or they must assume that mankind knows enough about

will not replace the complicated organism, itself a balance of nature's forces, which was the work of ages of slow growth. When our American coal and oil are exhausted we may hope that experts will find a substitute. But shall any expert build again in his laboratory an extinct bird?

Let us beware of flattering ourselves into a belief that, because we have begun to understand and control electricity, we can successfully guide the destinies of the living creatures of the world. That may come in the distant future, but certainly not until we know much more about the nature of life itself. History shows us



SAFE IN THE SUN-LIT FOREST

B. L. Brown

Here, in his natural habitat, the deer is a priceless adjunct to the lure and beauty of the wilderness and, recognized as a game animal, he rightfully enjoys almost universal protection.

every living species of bird, mammal, reptile, and fish to create a substitute balance which will work as well as the natural one.

In other words, they must take for granted a human knowledge almost equal to that of the Creator, or, if you prefer, co-extensive with nature itself. But it is only necessary to state such a proposition to show its absurdity.

Not having such omniscience, moreover, man cannot experiment with living creatures as he can with chemicals in a test-tube. If the chemistry experiment fails, more materials are at hand for a fresh attempt. But if the venture with a race of living birds does not succeed, and the race is wiped out, all the test-tubes in the world

that men can not create a new balance as good as the old. Once start tampering and the difficulties are multiplied. Of the scores of attempts throughout the world, all have had unexpected consequences and the vast majority have been disastrous. So well does the United States Government understand this that a law now forbids the introduction of foreign birds, on any pretext whatsoever, without a permit. It is realized that our country has been upset enough by the coming of the English sparrow and the Starling. Both, by diminishing the food supply, have driven out our native birds.

But the Federal Government has yet to learn of the dangers of extermination campaigns.

The wild life of the country is part of the national

wealth. Once start spending this capital, and it is easy to slip into disaster. "It would seem," says Dr. Witmer Stone, Curator of the Philadelphia Academy of Sciences, "that anything in nature that adversely affects man's worldly gain must be exterminated—the most dangerous policy that could be adopted! I feel convinced that no species should be exterminated without the most far-reaching investigation—the resultant upset to nature's balance can never be checked; one step brings on another like a falling row of blocks."

From the New Zealand region comes the same sort of story. First rabbits were transported to the Antipodes, and then, when they became a pest—as was long foreseen by naturalists—ferrets, stoats, and weasels were introduced as a futile attempt to exterminate them. But these predatory creatures, instead of materially lessening the rabbit plague, attacked the helpless fauna, especially the flightless birds, with results that can only end in the complete extinction of these interesting forms. In this field mankind seems practically unable to learn from experience. For now, mark you, without the slightest study, comes the proposal to introduce the Canadian "rabbit" disease into Australia in order to kill off this pest. This proposal has been made even before the malady is properly understood,

and without the slightest inkling as to its possible effects on other Australian species. As it is now known, however, that the rabbit disease is easily caught by man, the muddlers will do well to consider carefully before taking it to Australia. Truly the temptation to play with fire survives many a bad burn!

When the last of the bald eagles has been shot (and the time is not far off) we shall know our National Emblem only from his image on the pieces of silver which paid for his destruction. With the physical death of our wild creatures, and far sadder than that, comes the blow to our capacity for spiritual enlargement. Machinery is creating leisure, and it is destroying the wilderness where leisure might be enjoyed. Modern firearms are running amuck, and there is no one to cry "Mad Dog!" Man is destroying his own playgrounds,



H. Armstrong Roberts

THE HUNTER OF TODAY

Whether our wild life is to be preserved in anything like its original balance, asserts Mr. Carey, depends upon a race between enlightened education on one side and the game-worshiper on the other.

where highly specialized city minds may be brought back to normal; where unused muscles and atrophied lobes may be exercised freely once again; where we may live the lives of our hunting ancestors of remotest antiquity. A plague on these hairbrained exterminating campaigns! What man dares say that the wilderness is a better place because the eagle soars there no more? Yet now the cry is, kill the hawks because some of them eat a

few song-birds. Even the fishermen kill and throw away the small sharks, only to find that they are valuable for food. Where will it all end? If there is a powerful enough lobby among silk-growers, shall we hear next of a campaign to kill the song-birds, because they eat a few silk-worms?

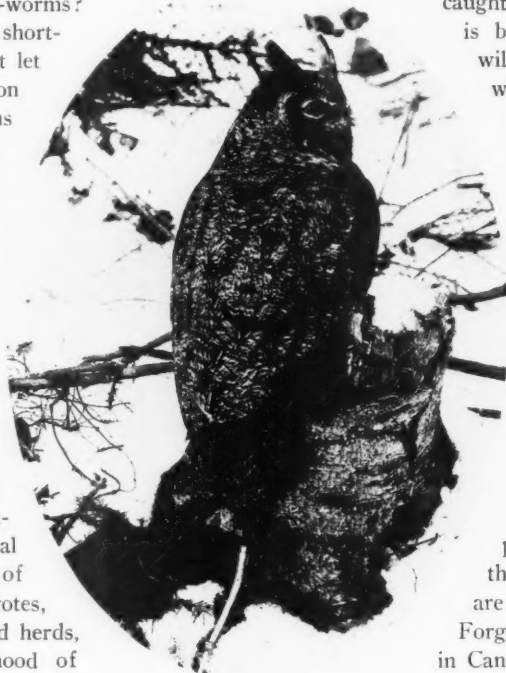
Nothing is impossible to the short-sighted and the money-mad. But let those who can see the writing on the wall confine their interventions in natural processes to reforestation, to reducing bag limits, to establishing fish hatcheries and game refuges. And let the motto of all be, "No importations of foreign wild creatures, and no extermination of native ones." Let us hope that the doctor will not be summoned too late. No one would deny that the United States Government is justified in controlling locally the enemies of cattle and sheep in the west. But local control must not turn into universal pursuit. The natural increase of wolves, mountain lions, and coyotes, in the vicinity of large flocks and herds, or of hawks in the neighborhood of chicken farms, must be controlled in deference to the rights of the breeders, but to exterminate the predatory species by pursuing them far from the scene of their robberies, is an infringement on the rights of large numbers of American Nature lovers who pay taxes and are quite as good citizens as the cattlemen and the farmers. It is no more necessary to wipe out a race of predatory birds or quadrupeds because some steal than it is to electrocute all Chinamen because some commit murder. By all means shoot hawks when caught in the act of stealing poultry. Destroy wolves and pumas in the precise region of their raids. But do not leave the farms and the cities to slaughter hawks by the thousands during the migrations, and do not kill all the wolves and pumas on the continent because in certain spots in the west they must be controlled. In the Kaibab Forest at least, far from cattle and sheep ranches, let wolves and pumas live, thus restoring the deer once more to their proper numbers.

In England, with its comparatively small area, the wiping out of most predatory animals was perhaps inevitable. But this does not apply to our country, where the open spaces of Texas alone are greater than the British Isles. Therefore, a second axiom of the government and the farmer should be "no native predatory bird or quadruped is to be shot off except in the locality where the harm is done." From all this it has been gathered that the keeping of the Balance of Nature is

the chief concern of the Nature-lover in his millions, as opposed to the Nature-waster. Nature-lovers want Nature left alone. It is well enough as it is. The

question first asked by Mr. J. M. Johnson, "To Whom Does Wild Life Belong?" is being caught up everywhere, and the answer is being shouted over the land that wild life is part of the national wealth, and belongs as much to the Nature-lovers as to sportsmen.

As already noted, the latest threat to the Balance of Nature is a campaign to destroy the hawks of the country, started at the very moment when Government studies were showing that the cotton rat (destroyed by hawks) is a voracious eater of quail eggs! This means that the owls will go too, for many persons cannot distinguish hawks from owls. Apparently no exception is made for hawks protected by State laws, nor for the vast majority of hawks, which are actually beneficial to the farmer. Forgotten is the recent insect plague in Canada, a result of killing off hawks. Forgotten are the researches of our own Biological Survey, which showed clearly that most hawks and owls do not as a rule touch poultry, whereas they kill enormous quantities of insects, mice and rats, the mortal enemies of the farmer. They are bent on exterminating the whole



THE GREAT HORNED OWL

Though not a game bird, a valuable factor in preserving the balance of nature through his normal consumption of mice and other rodents destructive to tree life. As such he should be protected.

hawk family, because of the sins of the stragglers. They do not know that if the natural enemies of mice and rats are destroyed, the Pied Piper himself would be unable to cope with them. Let them study the history of the mouse plagues in England, from 1580 to 1892, the cause of which is known to have been the absence of hawks, owls and other mouse killers. But the Nature-wasters go blithely on, oblivious of history, and careless of their coming unpopularity with the American farmer, after it is too late to restore the vanished hawks and owls, and after the rats and mice have ruined the crops. Nor is there the slightest reason to believe that when the hawks and owls have gone, the game birds of the American "game-worshippers" will be saved from their enemies. The enemies will be different, that is all. There being no predatory birds to kill off the weakling quail, grouse, and pheasants, widespread disease will infect the flocks and covies. "It has now been conclusively shown, I think," wrote Professor Spencer F. Baird, the very distinguished bird specialist, in 1882, "that hawks perform an important function in maintaining in good condition the stock of game birds, by capturing the weak and sickly, and thus preventing

(Continued on page 620)



AMONG THE MAZE OF SLOUGHS IN THE WINNIESHIEK BOTTOMS, WHERE GOOD FISHING ABOUNDS

"Gretna Green" on the Upper Mississippi

By WILLIAM T. COX

Superintendent, Upper Mississippi River Wild Life and Fish Refuge

IN THE good old days in the good old land there used to be a "Gretna Green" to which lovers fled to escape their pursuers. Many a strain of our citizenship may trace a lineage to Gretna Green just as others of us may point with pride to a family tree extending back to Lord Whatnot, to the *Mayflower* or to the California Argonauts.

Today a new Gretna Green is being builded on the Upper Mississippi. Here on the wide marshes of the

Father of Waters, our feathered friends, true lovers of the air, may drop from cloud-land to find a refuge safe from their pursuers.

Not only the wild fowl and the song birds may rest and nest and rear their young safe from the dangers that greet them elsewhere. Fishes of many breeds and game from quail to deer, fur-bearing animals and turtles and clams—a host of wild creatures will find a home in the woods and lakes, sloughs and marshes in this great



A FEW MUSKRATS WHICH HAVE ESCAPED THE TRAPPER. IT IS HOPED THAT, UNDER PROTECTION, THIS ANIMAL WILL INCREASE RAPIDLY

refuge now in process of formation along 300 miles of the Mississippi River.

This combination of public forest, game preserve, wild life sanctuary, fur farm, fish hatchery, public shooting ground and wilderness area is an outgrowth of the conservation movement that has been taking hold of the American people for the past twenty years. The Izaak Walton League, itself an outgrowth of the same movement, took the most prominent part in laboring for this refuge. It is a project dear to the heart of Doctor Nelson, chief of the United States Bureau of Biological

refuge in these States and delegated to Uncle Sam the task of protecting the area and developing the wild life and other resources within it.

This area had long been known as one well suited to wild life but also, because it overlaps the boundaries of four States, it has been known as a strip of country where conflicting game and fish laws, questions of jurisdiction and frequent changes of administration have made game law enforcement difficult.

The exact area of the refuge is still to be determined. It is to include all of the so-called overflow lands on



WOLF HUNTERS IN THE HILLS OVERLOOKING THE REFUGE

Though the exact area of the Refuge has not been defined, it is to include all of the so-called over-flow lands on both sides and including the islands in the Mississippi River from near the foot of Lake Pepin to Rock Island, Illinois, and there are still a few timber wolves and coyotes found there.

Survey and is warmly supported by many individuals and organizations who see in this reservation a means for perpetuating the sport we now have, and at the same time increasing the sadly depleted wild life of a great area.

When the bill was presented Congress arose to the occasion, and on June 7, 1924, President Coolidge approved the act authorizing the purchase of lands for the Upper Mississippi River Wild Life and Fish Refuge and authorizing the appropriation of \$1,500,000 to purchase the necessary land. The States of Minnesota, Wisconsin, Iowa and Illinois enacted legislation permitting the Federal Government to acquire lands for the

both sides and including the islands in the Mississippi River from near the foot of Lake Pepin to Rock Island, Illinois. This is approximately 300 miles. Surveys now under way will disclose the acreage with relative exactness but it is assumed that there are approximately 200,000 acres of land in this territory of the character that Congress intended should be acquired for the refuge.

Some of the provisions of the Federal Act are of special interest: A maximum average price of \$5 per acre was prescribed; the lands may be acquired by gift, purchase, or lease; only lands subject at times to overflow by the Mississippi can be included. The Biological Survey of the Department of Agriculture is given

charge of the acquisition work, the protection and development of the game, forests, fur-bearing animals and miscellaneous plant and animal life. The Bureau of Fisheries of the Department of Commerce is given general charge of the fish and other aquatic animal life in the refuge, both organizations working in cooperation with the States whose lands will be included.

The water area which does not have to be bought is very extensive and is probably just as valuable as land for wild fowl and fur production purposes. The possibilities of the waters of the refuge for fish culture are exceedingly great.

This is a region of important inland commercial fisheries and has been and is capable of becoming a more prolific source of game fishes, such as the black bass and and crappie.

Since the autumn of 1925 we have had a small force of surveyors, foresters, and land appraisers at work examining lands for purchase and determining the boundaries of areas already in Government ownership. At the present writing there are under Government control or contract for purchase approximately 35,000 acres, or nearly one-fifth of the contemplated area.

Most of the area to be included in the refuge, however, is in small tracts owned privately and it is a slow



A PLEASURE BOAT ON ONE OF THE MANY CHANNELS THAT WIND THROUGH THE REFUGE AREA

process negotiating with the owners. Practically none of them live on the land and many have to be located wherever they reside at points widely scattered over the country. A considerable part of the area to be bought is in estates or parties deceased. This situation seems a little odd at first but there is a reason. Persons many years ago bought tracts in the bottoms for wood, pasture or other purposes and later found them not readily salable. These lands were still in their possession when these people grew old and when they died the lands became part of their estates, many of which are still being "settled." Numerous farms extend from up on the bluffs down across the benches and out into the

bottoms. In such cases it is necessary to survey the portion subject to overflow and buy that part only from the owner. Delinquent lands are common and titles in many cases are none too good.

During the winter, in addition to examining and appraising tracts as offered for sale, much foundation work was done. Large areas were examined,



THANKSGIVING HOLDS NO TERRORS FOR THESE TWO. THEY ARE PART OF THE FLOCK OF WILD TURKEYS RELEASED ON THE MINNESOTA PORTION OF THE REFUGE IN MARCH, 1926

mapped, and appraised irrespective of ownership so that negotiations with owners might later be conducted even though high water or other difficulty might preclude examination when the owners were ready to negotiate. Winter also offered the best opportunity to get over the timbered swamps, the marshes, and lakes to see what local wild life persists in the area. It was found that at least small numbers of practically all of the mammals and birds common to this type of country and to this region still exist here despite the most persistent hunting and trapping. Throughout the area of the Refuge there is a small nucleus forming a "breeding stock" of muskrats. It will take only a few years of protection to restock the Refuge with these prolific animals. Raccoons are quite common. Minks, red and gray foxes, skunks, a few wolves, an occasional opossum, large numbers of cottontail rabbits, and gray and fox squirrels are found. A few beavers and otters are reported as are also half a dozen or so deer. Among birds there are the ruffed, pinnated, and sharp-tailed grouse, the quail, ducks, snipe, rails and coots, and other game birds; the pileated woodpecker, the cardinal, the king bird, the bald eagle, the osprey, the great blue heron, the indigo bunting, and a hundred other songsters, insect eaters, waders, and birds of prey. The Mississippi with its broad waters, its timbered swamps, its marsh land and bluffs, for centuries has been the great highway for the semi-annual flights of the feathered folk. Even the tiniest vireo, kinglet, or creeper flits from tree to tree along the wooded bluffs as it makes its way from Lake Itasca to the Gulf of Mexico.

We have many reservations in this country, but nearly all have had their purposes restricted. For various reasons this was probably necessary. We have National Forests and National Parks, State Forests and State Parks, Municipal Forests and City Parks, private forests and private estates and parks of va-

rious kinds. In the main these lands are managed with only a few objects clearly in view; other important uses being neglected and at times seriously jeopardized. What we have long needed is a great object lesson like the Upper Mississippi River Wild

Life and Fish Refuge to be intensively managed with a view to the fullest protection, development, and use of all the resources inherent in wild lands and waters. Now what changes can

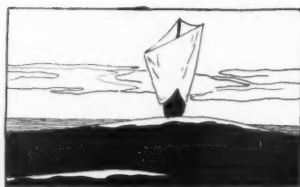
this wild life refuge bring? The wonderfully beautiful scenery will be protected. The wild fowl once traveling this water and arial highway in myriads, will be induced to linger and rest. Song birds even now plentiful will increase. Local game, once so abundant here, will be brought back and bred up until again it teems in the bottomlands. The beaver and other fur-bearing animals will in thousands again occupy the waterways and the woodlands. Fishes in great variety from the gamest to the most sluggish; from the enormous sturgeon to the tiniest sunfish, again will make lively the waters of the Mississippi. While much of the Refuge will have to be closed to shooting and maintained as a sanctuary in order that game and other wild life may increase, other portions will be open under proper restrictions so that

legitimate sport may be enjoyed by all citizens and visitors along the River.

Even the water itself no longer will be the slimy liquid that now oozes from city and factory to make of the River an open sewer. The anti-pollution movement is attracting wide interest and it would seem that legal action, public opinion, and a sense of decency on the part of cities and corporations will soon remove the source of pollution. Let us hope that as the woodlands and lakes are restored and wild life brought back the Father of Waters too may return to something approaching its primitive conditions when the Indian and the early settler paddled his canoe over it.



HERE ON THE GREYNA GREEN BEING BUILT ON THE UPPER MISSISSIPPI, THE WILD FOWL MAY REST AND NEST AND REAR THEIR YOUNG, AND FIND A REFUGE SAFE FROM THEIR PURSUERS





LESLIE SIMSON'S CAMP IN THE WILDS OF TANGANYIKA

Lions and Arrows

By SAXTON D. POPE, M. D.

ARCHERY has a long and honorable record in the past. Such glamor and romance surrounds it that nearly all men turn at the sight of a bow and arrow, and all boys are instantly drawn to it by magic and reach forth their hands to grasp this ancient weapon of our forefathers.

The bow was the implement that permitted man to project himself at his enemies in the jungle, defeat them; allowed him to leave his arboreal refuge and step out into the open world; the herdsman and the plowshare followed the archer. No wonder there is an instinctive attraction for the well bent stave and the flying shaft. Because it is a manly sport and because it gives a fair chance to animal life, many men are now turning to this ancient weapon of the chase.

In the west, a small group of sylvan archers have hunted all sorts of game, from ground squirrels to grizzlies, and found romance and increased delight in this method of shooting.

We are in no way competitors with gun men—that contest was decided over a hundred years ago in favor of the rifle. But because more wood craft is necessary to approach our quarry and because the element of personal achievement is larger where one puts his own vital energy into the swift flying arrow, the archer

has a sense of having done something more to his credit.

So, having laid low every type of big game in America, including the Alaska big horn sheep, moose and the Kadiak bear, we accepted the challenge of Africa.

Leslie Simson, an American who has lived much of his life in the wilds hunting big game, invited Arthur Young and me to join him in Tanganyika and try the bow on tropical beasts. Simson is a great hunter and has supplied museums with specimens for years. Probably no living man has had more experience with lions than he. Rhino, elephants, buffalo and all subsidiary game have capitulated to him in countless numbers.

He shoots with the most perfect firearms, of course, but he also has tried the bow and arrow on some of the lesser trophies of the veldt. So he had a sympathetic understanding of the limitations of our beloved weapon and no impulse to self exploitation. We were highly honored by his cordial invitation and found him a wonderful companion.

It must be stated at the outset that an arrow kills by hemorrhage; a bullet by shock. Though our broad head shafts may go completely through an animal the size of a deer, and cause death in a few seconds, still they can not be depended on to stop charging beasts. Even should we be able to strike these animals in a



THE AUTHOR, SAXTON POPE, PULLS HIS OLD ENGLISH LONG BOW

vital area, this is not sufficient to prevent mishap to the hunter.

Except where we use blinds or stealthy approach or protected positions, or are supported by spearmen, we have to be backed up by modern firearms. As a matter of fact, every sportsman who goes to Africa is backed up by one or more white hunters, even though he does

Our camp was at the Sironera River on the Sarangeti Plains at an elevation of 5,000 feet and great herds of widebeest, zebra and gazelles surrounded us on all sides. Lions were there in abundance; they roared about our camp at night, driving the herds in a stampede past us and made their kills on all sides.

So it was no uncommon thing to see a dozen or more



THE DEAD LIONESS IN THE CROTCH OF A WILD FIG TREE

This was a most unusual kill, for lions do not climb trees. But startled by our approach in the car, she had loped off across the veldt and mounted into the lower crotch of the tree, growling her indignation. When our arrows began to come, her rage was tremendous and in our excitement we shot wildly, using 29 arrows before she gave a great gasp and died.

not record this in his narrative. Roosevelt had two men at his side all the time, so have other notable nimrods.

Simson accepted this position with us, and to his cool, accurate shooting alone we owe our safety in many dangerous situations.

Young and I gathered our hunting equipment and archery tackle and started for Tanganyika. Each carried several bows, pulling from 65 to 95 pounds, and several hundred arrows of the old English type.

We arrived in Simson's camp in April of 1925 and started hunting immediately. We had an idea that our main shooting would be water bucks, antelope and similar game, but we soon found that lions were the only thing Simson considered game.

lions in the morning, as they worked slowly off the veldt, back into the jungle of the river or hills.

Simson's method of approaching these beasts was to course them in his Ford car, running over the plains and intercepting the lions as they sought cover. His skill in this dangerous business was remarkable, and as soon as a lion had galloped a short distance then come to bay in the tall grass, we would all jump out of the machine and advance on foot to meet him.

Our first successful assault started by meeting two female lions in the early morning and separating them. One at a time is quite enough for a novice. The larger of these great cats loped off across the veldt, turning from time to time to glare at us indignantly. Once or twice she stood as if to charge, then thought better of it

and seeing a large fig tree nearby, made a run for it and mounted up in a low crotch. This act was an almost unheard of novelty. Lions don't climb trees. But there she stood, switching her tail and grumbling forth her displeasure. Young and I had been running alongside the car with our bows strung and arrows nocked ready to shoot. Simson got out and joined us. We came up to within 40 yards of our lioness, and let our arrows fly at her.

The strangeness of it all and the excitement of the occasion made us shoot wildly. But in spite of her half-concealed position and constant dodging back and forth we landed an arrow into her head and chest. She lunged forward as if about to spring from the tree. We hit her again in the body and thigh. Her rage was tremendous and as she roared forth her challenge we wasted arrows in our feverish haste to finish our triumph. Turning in the tree she crushed an arrow in her powerful teeth and made as though to leap down either to escape or attack, when another feathered shaft was driven deeply in her chest. With great gasping sighs she wilted, fell headlong in

the tree and died. In less than three minutes from the time we sped the first arrow, it was all over. There she lay head down, in the crotch of a wild fig tree, the strangest sight in Tanganyika.

In all we had shot 29 arrows at this lioness, seven were in her body, a dozen were driven deep in the tree and the rest were decorating the African landscape.

In the next three or four weeks we had twenty different encounters with lions. In some of these we were charged even before we fired an arrow, and only the prompt action of Leslie Simson saved us from disaster.

One magnificent beast came to bay out on the veldt, some eighty yards away, and after being struck with an arrow in the foot, he came at us pell mell; his speed was terrific and at every leap he gave a rough sonorous grunt that was awe inspiring.

At forty yards, Simson let him have one barrel of his big double-gun. Still the beast came on. With long bounds he cleared the ground like a greyhound. His last spring covered 24 feet, and when he was in the air, breast high, Simson shot his remaining bullet



SO DIED THE KING OF THE JUNGLE!

To the victor belongs the spoils,—and Arthur Young stands beside his trophy. One of the finest specimens we got and killed entirely with the bow—he was a glorious sight in his rampant defiance before he finally succumbed.

and struck him squarely in the face. So great was his speed and so powerful the impact of the shot that the lion turned a complete somersault in space, and as we dodged to one side, his body hurtled through our midst and landed ten feet beyond us. That is how they charge!

In a case like this, of course, an archer has no chance whatever and very few hunters of the average type could have stopped him. In all we withstood some eight or nine charges of this sort, and I can assure you they are exhilarating, but in every instance Simson and later, Arthur Young did admirable service with the artillery.

He rose to meet us, but as he stood there with his mane erect and his tail lashing, he fell over in a faint. We circled him and launched a volley of arrows in his direction. They pierced his body and he expired without a struggle.

Slowly we came up to him and looked upon his magnificent body with admiration and pity. He was a noble sight and we viewed him with mixed emotions.

So died the King of the Jungle!

Of our twenty-one encounters with lions we killed five outright with our arrows. Several of these lived



HERDS OF GAME RUNNING BEFORE OUR CAR

Great herds of wildebeest, zebra and gazelles surrounded us on all sides, and the lions roared about our camp at night, driving the herds in a stampede. Our system of approach was to course the beasts in a Ford car, running over the plains and intercepting the lions as they sought cover. A dangerous business but one in which Simson was skilled.

Most of these resulted from approaching our quarry too closely. Moreover, where we got one good arrow into a lion early in the game he did not come in.

One of the finest specimens killed entirely with the bow, we met out on the veldt in company with a young female lion and a fat beardless male. They had been having a late party and our intrusion was poorly received by the big old fellow. We separated him from his companions. The female slipped away into the brush and her fat friend trotted off in a surly, disgruntled way. The big maned monarch refused to run and soon settled himself in the tall grass, and muttering imprecations at us. We got out of the car, knowing that if we did not he would come in. Then we approached him on foot until we reached a good shooting distance of 85 yards. Here we settled ourselves to shoot, and almost immediately got two good arrows in him. One hit him in the head, and he rose on his haunches vainly striking at this with his massive paws. He was a glorious sight there, out on the veldt, a lion rampant, lunging and clawing at the shaft in his head.

As he exposed himself thus we struck him deeply in the shoulder and chest and he galloped off to a shallow donga where he turned and roared his defiance at us. But it was plain to see that he was a sick lion, and soon he lay down and put his head between his paws. We waited for him to die. At last we approached

less than one minute after being struck; no guns were used. Seven lions charged us unprovoked and had to be dispatched by Simson. Three others were wounded and charged. The rest were mortally wounded with arrows and would have died, but for humane reasons or by mistake, were shot with bullets and dispatched. These statistics proved that we could slay lions with our weapons. But being unable to get the support of the Masai spearmen, we had to depend upon the gun to back us up.

Soon after this Leslie Simson left us to our own devices and went to India to hunt tigers, so after various hunting operations in the neighborhood in which we shot many different species of game with our bows, we moved our camp to the Grumeti River. Here Young and I decided to try lion shooting without the aid of a gunman.

We found an old boma or blind made of thorns, which had been used by Simson in the past, for photographic work. This we baited with the carcass of a zebra, covered with brush to keep off the vultures and hyenas. Next morning we found that a huge lion had eaten most of the bait and left his big tracks at the nearby stream.

We shot another animal and dragged it in a wide circle over the veldt. That evening we crawled into the boma and closed the aperture in back with brush.

It is a good idea to get under cover before nightfall

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© John L. Von Blon
THE GULLS' AVIATION SCHOOL IN SESSION AT LAKE MONO

With many thousands on the wing, and flashing in all directions, there was never a collision nor even a clash of feather tips. Note the striking airplane effects.

Feathered Aces of the Air

The California Gull is an Intrepid Flyer and Master of Every Trick of Aerial Navigation

By JOHN L. VON BLON

UNDAUNTED by surging ocean, towering, snow-flaunting ranges, dark forests, scorching wastes, remote inland waters, icy northern blizzards or burning tropical suns, the California gulls are among the most intrepid and versatile of the world's winged inhabitants. The birds of this species (*Larus californicus*) maintain western North America's noisiest, but most efficient and interesting, flying schools!

Scattered throughout a vast territory are scores of these rapid-training institutions. One that has come particularly under my observation, and will serve as a good example because it is representative, is that at Lake Mono, in central California, where thousands of mature members of a com-

paratively small colony teach their fledglings the intricacies of aerial navigation. It is a spectacle inspiring to a circumscribed mortal who cannot rise above earth without artificial means.

Every pupil has one or two expert instructors always with it, though little coaching is required. Education in the single but complex branch is compulsory and there is no flunking. Each becomes absolutely perfect in a few weeks, mastering the nicest problems in aeronautics, the thousand and one tricks of poise, speed and pursuit, even before the beautiful pinions are fully developed. Did actual graduation take place the degree conferred would be D. F.—Doctor of Flight. This, like every other, is an all-ace college. These gulls are extremely common in the

Golden State and they sail afar, yet there appears a lack of knowledge of their habits, both locally and generally. It is a strange fact that while they frequent the edge of the Pacific in the winter and much of the year, they do not breed on the coast or any of the sea islands but seek interior bodies of water in the spring. They go away from home to rear their families, which is an anomalous procedure. Large colonies enliven Great Salt Lake, Utah; Yellowstone Lake, Wyoming; Stump and Devil's Lakes, North Dakota; Clear and Eagle Lakes, California; Stick and Crane Lakes, Saskatchewan; Great Slave Lake, in the Northwest Territories of Canada, and numerous other places. They go well up beyond Hudson Bay toward the Arctic Circle, and I have seen them more than a thousand miles down the Mexican coast. They hardily and happily adapt themselves to any climate or environment. Defiant of distance, they fly many thousand miles from California to nest, and invariably return to that winter resort in greater numbers. They brave the Sierra Nevada from end to end. I have watched flocks of them at Rae Lakes, exactly two miles altitude, and in the tarns at 13,000 feet about Mt. Whitney and other eminences. And they seem to delight in the shade of dense woods surrounding countless lakes set high among the pines of the Pacific states, these loftier excursions usually

being made in mid-summer. Then, too, I have beheld them, mere specks in the empyrean viewed without glasses, blithely flitting across the blazing desolation that is Death Valley, directly bound for some distant destination.

Their pluck must appeal to any man.

That they are tremendously on the increase is patent at Lake Mono.

In the summer of 1917, the nesting population was given as but a few hundred, all on Paoha, the larger of two islands. In 1919, William Leon Dawson, an ornithological authority, found a thousand pairs there, but mainly on the jagged black and brown lava that constitutes Negit, the other lonely isle. Four years ago they seemingly abandoned Paoha and now there are fully ten thousand pairs on Negit. Other colonies show proportionate growth. Through recurring years the young return to the place where they were incubated and their broods augment the aggregation.

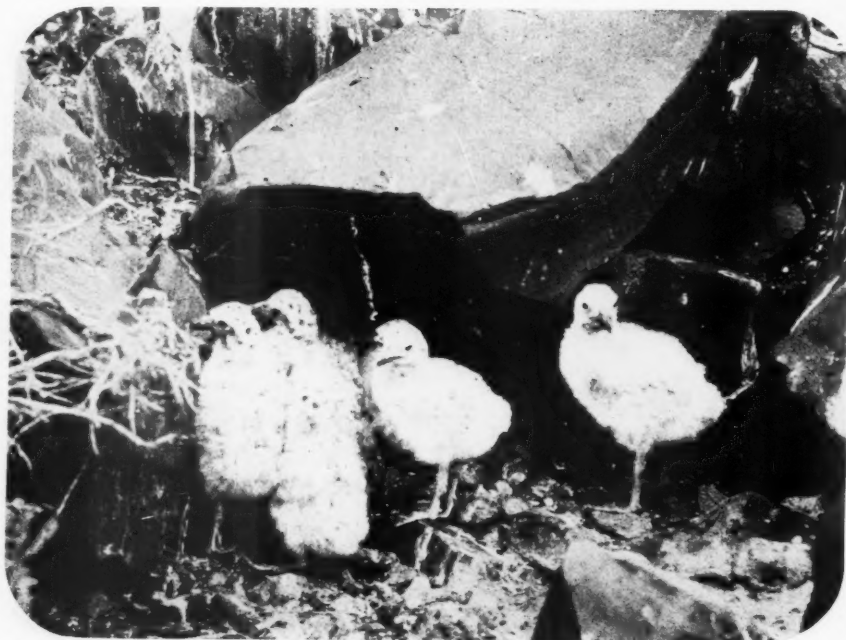
Last year I was among them when the chicks were just taking to the water and this season while laying still was in progress, the latter part of

May, and again early in July. It would be difficult to find a more remarkable or attractive sight. Few persons ever see the gulls on Negit Island because it is far from the shore where a boat is available and Mono's hundred square miles of light, dead, foamy water is as treacherous as any on the globe.



THE NESTING PLACE

This is an unusually perfect nest with a full set of eggs, olive drab, black spotted and twice the size of a hen's egg. Feathers were used in building this on the bare lava.



ALREADY MAKING THEMSELVES FELT IN THE COMMUNITY

Though only two weeks old, these downy, yellow, black-speckled chicks are ready for the water, for they can swim and dive like veterans.

Perhaps a dozen visitors reach the island in the course of five years, hence it is a virgin field for study. Isolated and without mammalia it is naturally an ideal bird refuge in season. No law is required to make it a sanctuary.

Imagine five or six acres of southerly slope so crowded with nests that it is almost impossible to clamber over the ragged lava among them without treading upon the eggs; and three weeks later the downy, fluffy, black-speckled yellow young gulls rolling like so many puffballs to the water and paddling out of reach and you have a fair picture; add the screaming of a horde of alarmed parent birds perched

O. W. Howard, the Los Angeles ornithologist who accompanied me, found one set a clear blue, almost sky hue, which was taken for scientific purposes.

The same investigator made a peculiar discovery—a thousand or more mummified young birds of various sizes from the previous year scattered among the nests. These must have perished either from disease, improper feeding or exposure, probably the latter. Mono's elevation is 6,700 feet and the snow sometimes flies after they are hatched. It is in a harsh region, withering hot in summer and frigid in winter. There

also were full grown gulls with large fresh trout in their beaks, choked or killed in battle for the deli-



THE AVIATORS ALARMED

© John L. Von Blon

In frenzied flight above nests and young on Negit Island, Lake Mono. The wild, dramatic sky effect was due to a storm which menaced chicks and eggs.

around you or madly swinging above and about, their swishing wings fanning your face—a deafening bedlam.

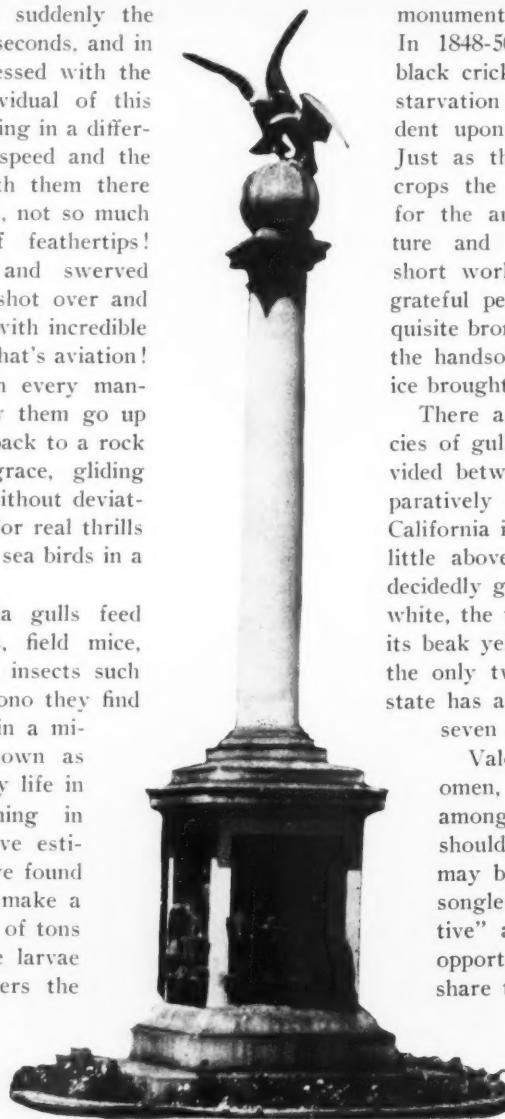
Most of the eggs were laid on the bare lava and rocks and sand, some on bits of grass and sticks, and a very few in real nests carefully constructed of tail and wing feathers—old ones from the previous year's moulting gathered up and utilized. The difference was like that between a mansion and a shack and proved that in gulldom there are the painstaking and the shiftless as among humans; and the prettier eggs were in the better nests. The makeshifts extended from within a few feet of the lake to three hundred yards back. Generally the eggs are fully twice the size of a hen's and three in a set. They are an olive-drab or robin's-egg blue spotted with black or brown and vary widely.

cate morsels. Though they are scavengers none of the others would touch the fish. The trout evidently were taken from Sierra Nevada streams or freshwater lakes and carried miles by these swift, tireless bearers.

When the accompanying photos were taken an angry storm was sweeping the "solemn, silent, sailless sea," as Mark Twain describes Lake Mono in "Roughing It." All the adult birds were on the wing and frantic because of the danger to the young. Their circling, darting, whirling, zigzagging and somersaulting against the thunder-clouded sky with the lightning flashing through, made a wild, dramatic spectacle in a weird setting. The din was indescribable, every bird screeching its loudest, seemingly in defiance to the elements, the wind and sleet and thunderbolts that

periled the settlement; then suddenly the noise would cease for a few seconds, and in the brief silence I was impressed with the fact that though every individual of this mighty feathered host was flying in a different direction and at terrific speed and the air was literally jammed with them there was not the slightest collision, not so much as the audible clashing of feathertips! They swirled and swooped and swerved in a tumultuous frenzy and shot over and under and around each other with incredible velocity but never touched. That's aviation! And surely the gull is worth every man-flyer's close attention. I saw them go up almost out of sight and soar back to a rock landing with incomparable grace, gliding hundreds of feet in the gale without deviating from a straight course. For real thrills watch a flock of these fearless sea birds in a tempest.

While inland the California gulls feed principally upon grasshoppers, field mice, crickets and various bugs and insects such as the locality affords. At Mono they find a rich source of food supply in a minute form of crustaceans known as brine shrimps that are the only life in the mysterious lake, swarming in ghostly myriads—a conservative estimate indeed since scientists have found that a million are required to make a pound and there are thousands of tons of them! At some seasons the larvae of a certain peculiar fly borders the lake with a wide strip of black—more easy eating. The greatest tribute ever paid the California gull was that by the pioneer Mormons of Utah, where every species is held sacred on its account. An impressive



A TRIBUTE TO THE GULL

This beautiful monument was erected in gratitude to the sea-gulls by the pioneer Mormons of Utah for their service in quelling a plague of black crickets when in 1850 the settlers were facing starvation.

monument in Salt Lake City tells the story. In 1848-50 that state was overrun with black crickets and the settlers were facing starvation because their lives were dependent upon what they raised in the fields. Just as the invaders began devouring the crops the birds swung in from California for the annual nesting. Gluttons by nature and exceedingly hungry they made short work of the crickets and rescued a grateful people from a tragic fate. An exquisite bronze figure of two gulls surmounts the handsome granite testimonial this service brought forth.

There are approximately fifty true species of gulls in the world, about evenly divided between the hemispheres, with comparatively few common to both; and the California is one of the most numerous. A little above medium size, it is a striking, decidedly graceful bird, its under part clear white, the wing coverts blue and black, and its beak yellow. This and the Western are the only two California residents but that state has an immense gull population, with seven or eight migratory species.

Valorous, cheerful and of good omen, the wide-ranging gulls are among humanity's best friends and should be better understood. They may be squawky, raucous and utterly songless but they are happy, "talkative" and companionable if given the opportunity. And they do their full share toward keeping this sphere in a sanitary and healthful condition. Without them the oceans and lakes and shores of the world would be somewhat drear, and the landlubber and mariner would miss their persistent presence and their loud "conversation."

Lions and Arrows

(Continued from page 590)

in Africa, otherwise one will be missing in the morning. So we retired before sunset.

We sat on the sweet jungle grass in the back of our small thorn enclosure and waited for darkness to descend. Bats came out and owls hooted. The shadow of the hill fell across the quiet land. The moon rose and made a mottled carpet of soft light beneath the tree where we waited.

Off in the distance a hyena wailed and chattered; a leopard gave his rough rasping cough in the donga. Then far away we heard the rumbling roar of a lion;

the hunt was on. An hour or more we waited in silence, fingering the sharp edges of our arrows and holding our bows across our laps. Nearer and nearer came the bellow of the old lion. Then a long period followed in which only the distant bark of a jackal reached our ears.

Without warning, without a single audible footfall, we heard the great sighing breath of a lion, close to our enclosure. Too close! Immediately he flung himself upon the carcass outside and lapped the blood. Tearing, ripping, gulping sounds came to us in the boma. It

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Big Game in Alaska

By PHILIP R. HOUGH

MUCH has been said by professional big-game hunters and writers on the subject of hunting in Alaska, particularly by "trippers" or those who take a trip through the Territory and then write it up. This article is not by one of these, but by one who worked and lived in the north-land. My work for three years in Alaska was outdoors and in that time I traveled about 50,000 miles by boat, on foot, and in the saddle. While ashore I have hiked up about two hundred streams that flow into the ocean in the southeastern district, which is truly the "home of bear"; and as a big brownie is the most interesting and sought-after prize of the hunter, we will start with bears.

Every hunter enjoys a bear story, so here is an incident that took place one evening on Baranof Island, with a young Italian fisherman and a "muskeg" in the leading roles.

We had dropped anchor for the night in Hoggat Bay, incidentally to get out of the seaway in Chatham Strait so that the cook could keep something on the stove long enough to build a meal. Just before dusk a fishing boat came in and picked an anchorage near ours. Their skipper rowed over for a visit and as we sat around in the galley remarked that his Tony, who was just then rowing ashore with a gun, was the clumsiest man on land he had ever seen. "Every time he goes ashore he gets lost or

something," commented the skipper, and for some time we were entertained with tales of Tony.

In half an hour or so the silence of the forested mountainsides was rudely punctured by four shots, about as fast as a man could work the lever on a rifle. Another half-hour and we heard oar locks creaking as Tony's skiff came alongside. He came aboard and found a seat in the corner near mine. In a few minutes I noticed that he was fumbling with his fingers a good deal and a closer look showed that he was pulling out tufts of hair that were wedged in under his fingernails. I picked up one of the tufts and thought that they were bear hairs, and after passing the tuft around the galley, all agreed that they were "bear hairs all right." In response to his skipper's inquiry as to what he had been up to, Tony told his story, and in a dialect that was a knockout. Says Tony:

"I go up a dry creek an come to the big windfall. I have to go over it, and it is higher than my head. So I throw the gun up on top, an then hunt for a place to climb up. After I get on top I pick up my gun and look for a place to jump down. I walk along on the log an see a nice brown "muskeg," a nice big piece of moss. I jump with both feet on the muskeg,—an the muskeg get up—an tell it to me—"Umph." The muskeg knock me clear over a big rock, and then come up on the rock an' look down at me. Lucky

I keep hold of the rifle, an' I shoot him four times in the face. Then he turn an'



Philip R. Hough

LOOKING SOUTH AT MOUNT MCKINLEY AND THE ALASKA RANGE, FROM FORTY-FIVE MILES AWAY

This mountain, known locally as Denali, with an elevation of 20,300 feet, is the highest in North America and is said to be the biggest hill in the world because of its enormous bulk and height above its own base, a matter of some eighteen thousand feet. Here in this great Alaska country, are found the most interesting game animals in America, and it is the mecca of the big-game hunter.

run down hill like one express train locomotif."

I killed one bear in Alaska, and my experience checked up with the opinion of many as to the so-called charging of a wounded bear upon the hunter. To my mind the bear is making for the nearest cover, and the hunter who is in that nearest cover, quite naturally thinks he is being charged. My experience with dozens of bears indicates that a bear will get out of sight if he senses the presence of man. When a man shoots at a bear he has usually seen the bear first without the beast's knowing it. He has made a stalk, with the result that the man is in or near the nearest cover.

In my own case I was hiding one evening on a river bank near a moose runway hoping to get a shot should one step out in the clear to swim across. It was quite



THOUGH ONLY THREE DAYS OLD, THIS YOUNG MOOSE SEEMS TO LOOK WITH SUSPICION ON THE WORLD AND QUESTION WHAT IT'S ALL ABOUT

dusk when out came a grizzly who waded into the river and then started to swim for the other side.

I hiked up the beach to the point where he took the water and at a range of about 100 feet let him have one that grazed his shoulder, not a serious wound but one that must have been painful. He turned and headed back to shore "two bells and a jingle," or full speed ahead. And how that bear did churn up the water! I am positive that the bear did not see me, and was only trying to get out of sight in the least possible time. That meant he must come to the nearest point of land, and I was standing there. Another shot hit him in the shoulder and he must have seen me, as he again did "to the rear, swim," and headed for the opposite bank. A third shot glanced off the top of his head and into the water fifty feet beyond, but hit with



OUR CAMP ON THE TAKU RIVER. HERE IN SOUTHEASTERN ALASKA, BIG GAME ABOUNDS, THE BROWN BEAR BEING THE MOST INTERESTING AND SOUGHT-AFTER PRIZE OF THE HUNTER

sufficient force to knock him clear under the surface. When he came up he was a sick bear, and another shot in the ear from the side finished him. He floated a while and then got caught in the current, to be sucked under, never to appear again.

My first moose furnished an experience that was trying on the nerves. I had climbed a tall spruce tree located in a sort of hedgerow that bisected a large meadow, before the gray of dawn. After it began getting light I saw seven different moose, but all too far away for any sort of shot. The wind was blowing and made quite a noise in the tree top where I was. Once between gusts I thought I heard something large moving about almost straight under me. After much looking I saw that some of the brush was moving irrespective of the wind. I felt sure that a moose was browsing very near me; but not one hair could be seen to shoot at. He certainly was not over 100 feet away, and there I was for what seemed like half

an hour without being able to see a thing to indicate his position. Strain my eyes as I would, not a single patch of the moose could I see. Then I began to think. I worked out a plan. I decided to get down the tree, deliberately go to his windward and make such a noise that he could not fail to detect me, and depend on his running out either into one meadow or the other while

still near enough for a shot. Accordingly I came down the tree as quietly as possible, walked carefully on the grass to a point I thought was to his windward and then proceeded to whistle and break sticks. After

a pause no moose appeared, so I went through the thicket to look into the other meadow, and there he was; a young bull, walking as daintily as a deer through the tall grass evidently trying to steal away, with only his head showing.

Inasmuch as I was hunting for meat, not trophies, the young bull was very satisfactory game, so after taking a good look to be sure I was right about it, let him have one right at the junction of neck and head, and down he went like a sack of potatoes. Immediately I was sorry I had done it. It was just about as sporty as shooting down an unsuspecting mule in a pasture at a range of about ninety feet.

With this one, each of the three of us in the party had got his bull, so we decided to go home. The first two moose we had canned with a portable steam

cooker, so we headed down the Taku river with thirty-dozen 1-pound cans of moose meat and the four quarters of my young bull fresh. We hung him up in cold storage in Juneau to furnish many fine steaks that winter.

One of my friends brought in an unusually fine goat trophy by climbing the mountain which is between



THE AUTHOR TAKES AN ALASKAN MOOSE. THESE LARGE GAME ANIMALS ARE PLENTIFUL IN OUR NORTHERN TERRITORY, BOTH ON THE COAST AND IN THE INTERIOR COUNTRY

the Sawyer glaciers at the head of Tracy Arm, a very inaccessible place. He reported that the mountain had a flat top and that when he looked over the top there were many goats in sight, some of them very near, that gazed at him like so many cows. Evidently they had never seen a man before and had no fear, so after looking over the bunch to pick the biggest, shot it down. The bunch stampeded at the first shot. He estimated that the goat would weigh over 400 pounds. I hope to live to see the day when a film of Tracy Arm taken from the air will be shown to the public. There is certainly nothing in the United States to compare it to. Imagine a narrow body of beautiful green water floating purple icebergs, flanked by great brown cliffs rising to enormous heights, in places a vertical mile. On the south side I saw a waterfall which fell and fell and fell, probably several thousand feet and then all the water floated off in clouds without a drop reaching the bottom. The sun caught the thousands of feet of spray and turned it into all the colors of the rainbow, not all at once but one color at a time. The falls would appear violet, then indigo, blue, green, yellow, orange, and red. It was a wonderful phenomenon lasting for ten minutes. A dozen seals were out on a flat berg.

Such was Tracy Arm when I saw it after a half dozen previous unsuccessful attempts to get in, because of the jam of icebergs at its entrance. I doubt if the appearance of Tracy Arm will ever be changed by the hand of men. It is a dangerous undertaking to try to get in by boat, and that is the only way except of course by airplane. Once you are in, a constant vigil must be kept for icebergs. The shores except in a few places are perpendicular, with water a thousand feet deep, so that the bergs grind along the walls and there is no safe anchorage. The tide rises and falls as much as twenty feet. Think of a body of water 25 miles long, $\frac{3}{4}$ -mile wide, 20 feet deep and floating icebergs all passing through a narrow entrance four times a day, with shallow water in the entrance so that many of the bergs ground themselves. You can understand then why I said it was a dangerous place

for a man in a boat. The bergs are from the Sawyer glaciers at the head of the Arm. The northerly glacier is enormously high and narrow, and is a dandy place to stay at least a quarter-mile away from. Hunting in the open country of the interior of Alaska is an entirely different proposition from that on the coast where it is rough and brushy. In the open rolling tundra country game can be seen for miles, and caribou is the most numerous kind of game. I had the pleasure, except when the mosquitoes were bad, of spending several months in the Mount McKinley country, where there is much big game. The first three weeks we were there not a head was seen, and it was disappointing indeed. One of the bunch said over and over again, "A country teeming with game and not a team to be seen!" We later learned that the game was all high on the mountains to escape the mosquitoes. In July we began seeing small groups of caribou, and these groups constantly increased as the summer progressed, until by September we encountered bands numbering thousands. At the approach of a man on foot a caribou will run off with an easy gait that puts him at a distance in a surprisingly short time, then turn and look. Frequently they will run around you in circles with a radius of



TO THE SEEKER OF THRILLS, IT IS RECOMMENDED TO WAKE UP SUDDENLY AND FIND YOURSELF THE OBJECT OF INTENSE REGARD BY A GREAT ANTLERED BULL CARIBOU!

about 300 yards. On the other hand, a man with or on a horse seems to attract the caribou, and they will walk right up to a very close range. I will never forget the first time I had to go through a band of about 500 wild caribou. We were on foot and had a dozen pack horses moving camp. As we came to the top of a ridge, we saw the next ridge in our line of travel all dotted with 'boos. About fifty or so started toward us at once. We kept right on going. They advanced on us but did not seem hostile, merely curious. We kept right on through the band, passing within fifty feet of dozens of them.

Of all the thousands of wild caribou I saw, only once was I uneasy. One day I had hiked out alone for nine miles across the tundra in order to climb a hill near Muldrow Glacier to take a picture of McKinley. It was one wonderful day, with not a cloud

in the blue sky. After making a couple of exposures, which later were no good, I sat down and began to contemplate the enormous mass of the great iceclad hill. I was about 25 miles away from the summit, for you have to stand off that far to see it well. The scene was stupendous. Imagine, if you can, twenty-five Woolworth buildings end on end, or thirty-two Washington Monuments. That's how high above me the top of McKinley reared itself, a glittering separate world of blue and white ice. The sheer enormity of that sight began to grow on me and in a while I developed a distinct sickly feeling. I began to think of those nine miles of soft plodding over the moss back to camp, and decided I had better be getting started if I were going to be sick. After a couple of miles I came to a big boulder and thought that I would get in its shade and take a nap. It might make me feel better, and time did not make any difference, since it was just about as light all night as it was in the day time. Well, I don't know how long I slept, but I woke up suddenly and there about a hundred feet away stood a great bull caribou as motionless as a statue and looking right at me. He had the biggest antlers I saw that season. Well, I didn't know what to do. I had no gun. We regarded each other for about a minute, and I had just about decided to get up quickly and try to climb that boulder when he turned with an air of majesty and started to hit it off with that easy gait that is theirs alone, and was out of sight before I thought of the camera. When he turned away, out went his muzzle and down went the antlers until they nearly touched his tail.

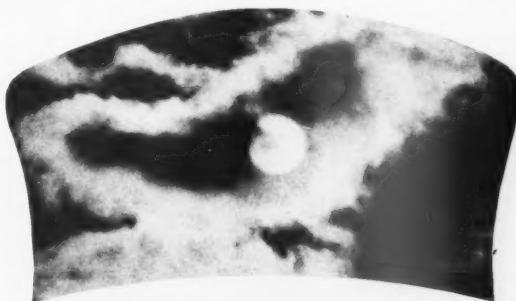
It was a sight worth going a long long way to see.

Another sight that will always be fresh in my memory was that of a cow moose with twin calves one morning as I was back-packing over a hill. As I came to the brow, up got a cow about two hundred feet away, which after a vigorous shake started off a few paces. Then up came two little brown calves out of the blue-berry brush. They must have lain there all night as they stretched thoroughly, looked at their mother, looked back at me, and then plunged and galloped after the cow which led them over the hill. Their bodies were about as big as collie dogs but with very long and supremely awkward legs.

It is a daily occurrence to see large bands of white mountain sheep in the mountain passes in the McKinley country. One of our party tried to count one band, and gave it up as a bad job at the thousand mark.

Sights like these have made me anything but a big-game hunter. Every head of big-game I killed in Alaska, including moose, deer, caribou, goat, sheep and bear, was used for food except the bear that sank. Not one trophy do I have. Those splendid animals of the northland are just as much entitled to live and enjoy their liberty, have just as much purpose in this world as I have, and it is my sincere wish that their numbers may never be diminished. With the possible exception of some individual

bears, not one big-game animal in Alaska has any natural animosity toward man, and as a matter of fact one is much safer physically in the wilderness than on the streets of our larger cities today.



THE HUNTER'S MOON

I can hear the outdoors calling,
Loud above the city's hum!
I can hear the torrent falling,
See the rapids' foam and scum,
I can hear the wild wind sighing
In the forest, through the day;
And the echoes, never-dying,
Of the moose-call, far away.

I can hear the partridge drumming,
And the drakes by the lagoon.
Loud above the city's humming
Comes the shrill cry of the loon.
I can glimpse the sunlight gleaming
On the lake, whose waters blue
Part in silver ripples, streaming
From the old birch-bark canoe.

I can hear the outdoors calling;—
See the forest, red and gold,
Where the autumn streams are brawling
Over pebbles, clear and cold.
I can see the river flowing
Past the oaks and fragrant pines—
Back to nature I am going,
While the Hunter's Moon still shines!

Clarence Mansfield Lindsay



Remembering the Buffalo

By EDGAR L. PERRY

Photos by J. Stokley Ligon

TIME was when the broad and sovereign State of New Mexico possessed the kind of hunter's paradise that gladdens the dreams of today's Nimrod. It was a paradise which in the cold gray light of consciousness exists only in a very few extremely isolated and inaccessible places within the boundaries of the continental United States. Mountain sheep roamed the crags and skirted the precipices of the high mountain ranges, deer and elk and turkeys were more than plentiful on the mesas and mountain slopes, bison and antelope were in greater numbers on the plains than cattle are today. And a host of less conspicuous animals, from the desert quail to the alpine grouse led a happy and prosperous existence in the land.

But all that was before the advent of the highway engineer and the internal combustion engine. Today, the buffalo and the native elk are gone to whatever bourne it is that harbors the dodo and the good five-cent cigar; the mountain sheep and grouse and antelope are being slowly nursed back from the very brink of the valley of the shadow, and the numbers of many other varieties of game animals are far below the capacity of their ranges

to support them. It is not a new story, this tale of a vanishing wild life, nor one peculiar to New Mexico. It is part and parcel of the oft repeated story of a tardy awakening of the public conservation conscience, a tardiness that allowed an almost inconceivable proportion of our tremendous heritage of natural resources to slip away into the land of pleasant memories.

Unlike some other conservation measures, the idea of protecting game is not new. It dates back a long,

long time, as time is measured in our juvenile country, and most States and Territories had game laws of some sort long before there was really any very popular demand for them, or concern over the possible fate of the game. They were generally a sop thrown to a small, but none the less persistent and disturbing minority, and if an earnest attempt was made to enforce them it was sometimes necessary to paddle backward very rigorously to avoid being shipwrecked on the snag of public disapproval.

But the cloud was not without its silver lining. At least it provided a pleasant office of not very onerous duties with which to invest an able lieutenant of the Grand Old Party. This functionary took on the title of Game Warden or Game Commissioner, according to the tastes of the legislature creating his office, and his duties consisted of spending whatever moneys found their way into the coffers of his department, balancing himself nicely upon the fence dividing the pros and the antis, and skilfully side-stepping situations that might embarrass the Administration. Consider that several years have passed. Game

departments have wandered along in easy and pleasant ways; game has proceeded toward the vanishing point with its accustomed celerity. But the small and disturbing minority aforementioned is still very much on



THE LAST OF THE BUFFALO

A small herd maintained on the McKenzie Ranch in the Pecos Valley.

the scene; in fact it is more disturbing than ever, and it is no longer so small. Whereas its charter members had been more or less actuated by a prophetic vision into the future, its ranks now included a host of sportsmen awakened to the fact that hunting and fishing was no longer what it used to be, and ominously demanding to know what was going to be done about it.

Now it happens that game and fish departments were variously created according to two schemes of

financial maintenance; in one case the department was financed by an annual appropriation by the legislature, in the other by the receipts from the sale of licenses and permits.

Perhaps the latter scheme was an attempt to curb the demands of the sportsmen, since any expense incurred must be met by them in license fees, but if so it failed of its mission. On the other hand it placed a powerful lever in their hands for it gave them the opportunity to make the logical suggestion that since their money sustained the department, it was no more than just that their judgment should also dictate its policies and direct the disposition of its funds. Sportsmen's organizations were founded, leadership gravitated into the hands of real leaders—as it is wont to do—and the demand became stronger and more insistent for game administration by, for, and of the sportsmen.

In New Mexico it became so strong and insistent by 1921 that the legislature of that year was constrained to pass a commission bill. The various local organizations throughout the State had coalesced into the New Mexico Game Protective Association, which adopted the potent watchword "Remember the Buffalo," and girded up its loins for a fight to the finish. The old guard did not surrender without a bitter struggle, but it is only fair to say that its capitulation was complete when it came. The bill provided for the appointment of three commissioners for terms of six years, only two of whom might belong to any one political party. The commission was vested with broad regulatory powers which were still further widened by the 1925 legislature, when the appointment of the Game and Fish Warden was placed in its hands.

The Commissioners serve without remuneration, and have so far been men active in wild life conservation and approved by the State Game Protective Association. Whatever glory may attach to the office



THE HEAD OF TRUCHAS

This is the source of one of "Desert New Mexico's" trout streams,—in August.

is more than offset by the self-sacrifice involved. All of the members have extensive business interests, yet they meet monthly at the Capitol, two of them coming from distant points in the State.

In these conditions, however, lies the germ of the present efficiency of the Game and Fish Department. All of its financial transactions of any consequence pass through the hands of the Commissioners, and receive the benefit of the business acumen that has created their successes in private life. In addition, these men are all old-time crusaders in the cause of wild life conservation, and in the course of the long campaign have collected a store of knowledge gained by a stern necessity for confounding the enemy with unimpeachable facts. It is not surprising, therefore, that the relatively tiny reve-

nue of the fourth largest State in the Union is manipulated to cover a rather impressive amount of ground.

None of the present Commissioners are politicians in any sense of the term. So far as their history is known to the writer none of them ever held or sought any other public office, and they are firmly and irrevocably Republicratic so far as the conduct of the Department is concerned. The Chief Executive exercised a degree of wisdom and impartiality in their selection all too seldom encountered in state officials, a fact that has not a little to do with his popularity among the sportsmen of the State.

Without overlooking the natural and inevitable progress necessarily attending the steady pressure of time against the bulwarks of even the most reactionary of institutions, the accomplishments of the Department under the commission form of administration contrast too sharply with those of the pre-commission era to leave any doubt regarding the efficacy of the non-political commission scheme. Indeed, the line is so sharply defined as to indicate that the organized sportsmen had their plans formulated and ready

to put into effect the moment that they should assume control. To mention only major activities, the commission was installed in 1921, and during that same year the first fish hatchery was built, the first game refuge established, and the first stream closed to fishing in order to allow its stock to recuperate.

I do not wish to leave the impression that the Department was suddenly transported by a single wave of a magic wand into a sort of administrative millennium wherein it lived happily ever afterward. As a matter of fact, it stepped from an era of comparative placidity to one of considerable stress and storm. Naturally the new order clashed with the old. What started bravely forth to be brilliant innovations sometimes had to be much modified in order to keep peace in the family; incandescent enthusiasms frequently had to be squelched lest they fire the whole structure; the Commission, too, made mistakes in groping about for orientation. Nor would I blandly state that the Department has now reached that millennium through the glorious process of working out its own salvation. It is still fighting here and compromising there, following as it were, the dictates of that curious combination of conscience and good business that seems to be necessary in dealing with the problems of a wicked and workaday world. Neither has the Commission ceased to make mistakes, and God help us if that fact ever fails of recognition. None the less, progress has been certain and steady, and it has not been unduly laggard. Since the days of 1921 that first game refuge has grown into a system of 57 that have the sanction and support of the sportsmen and local residents. Our first fish hatchery has been much expanded and two others built; a scientific survey of the game and fish situation throughout the State has been undertaken; the practice of planting fish fry from the hatchery troughs to the turbulent wild waters with the realization that 800 out of every thousand would die has been abandoned in favor of the practice of raising them to fingerling size, at much ad-

ditional expense but with the assurance that 800 out of a thousand will live.

But the most outstanding effect of the commission system has been that it has given the sportsman a seat in the councils of the Department. No longer is he an impotent onlooker, paying his money into the game protection fund and gnashing his teeth over the lack of protection given the game. If he has a criticism to make, and he generally has, he need only utter it to get immediate action one way or the other. The result

is that the Department now has a good many

thousands of cooperators where it once had as many helpless observers filled with a passionate longing to administer a good swift kick where it

would do the most good. People

who used to consider it money

thrown away to buy a hunting

or fishing license have experi-

enced a change of heart,

with the effect that the

revenue has increased some

fifty per cent since 1920.

Back in the dark ages

the Department made a

feeble attempt to stock

fishing waters by acting

as intermediary between

individual applicants and

the Federal Bureau of

Fisheries. The new order

will this year raise nearly

five million fingerling trout

of its very own, and plant

them according to a prear-

ranged plan based upon a study

of the actual requirements of the

various waters. It is making an

earnest and successful attempt to

restore the game and maintain it at

a proper level by natural methods, lack-

ing the means to employ artificial meth-

ods, and has enlisted the cooperation of

the public to that end. It is lovingly fin-

gering every nickel of its \$44,000 reve-

nue before it is spent, and endeavoring

to make it buy six cents' worth of game

and fish. The Commission is as independent as a Government mule, and sometimes as hard boiled. It can afford to be. Like the Village Smith, it owes not any man. It is motivated solely by the fact that it likes to hunt and fish—and it remembers the buffalo. In this, it speaks and acts for the real sportsmen of the great State of New Mexico.



WILD TURKEY ON THE EAGLE
PEAK GAME REFUGE

Time was when deer and elk and turkeys were more plentiful on the mesas and mountain slopes of New Mexico than cattle are today.

When visiting the Sesquicentennial Exposition in Philadelphia make your headquarters at the booth of The American Forestry Association. The attendants in charge will be glad to furnish information regarding hotels, streets and the exposition, and to assist you in any way possible. Mail can be sent to the exhibit and will be held until your arrival. Address: The American Forestry Association Exhibit, East Wing, Palace of Education, Sesquicentennial, Philadelphia, Pennsylvania.

Legislative Needs in Forestry

An Address Before the Society for the Protection of New Hampshire Forests

BY GEORGE D. PRATT

President, The American Forestry Association

I HAVE been asked to speak on the legislative measures relating to forests pending before Congress.

There is much to be done, not only in Federal legislation but in State, because our citizens have been unwise in their conservation of our natural resources.

With depletion of our timbered areas in the East through lack of forethought and the steady cutting of the forests on the Pacific Coast to take care of the needs of the East, the people of this country will some day awaken to the fact that they are woodless.

What will they say of those who preceded them? They wasted their substance in riotous living and have left nothing for us. We should keep in mind what Ruskin said: "God has given us the earth for our life. It is a great entail. It belongs as much to those who come after us as to us, and we have no right, by anything we do or neglect, to involve them in any unnecessary penalties, or to deprive them of the benefit which was in our power to bequeath."

It is high time that the people of the nation were aroused to the crying needs of our forests. Only by public sentiment, both local and national, can we persuade the powers that be to pass the necessary legislation to preserve what is yet left to us.

Legislation is necessary and should be passed, and some unwise bills should be defeated.

For something over fifty years now The American Forestry Association has labored to carry forward its work of creating forest sentiment and promoting wise forest measures. I have placed the molding of forest sentiment first, and in doing this I am thinking of something Abraham Lincoln once said:

"With public sentiment" so runs his saying, "nothing can fail. Without it nothing can succeed. Consequently, he who molds public sentiment goes deeper than he who enacts statutes or pronounces decisions. He makes statutes possible or impossible to be executed."

So, forestry legislation of a wise nature is possible only through the force of public opinion and the vision and energy of public officials. The passage of laws—even of wise laws—does not come easily and there is much of what may be called legislative drudgery which some individuals and agencies must perforce attend to. The American Forestry Association has been active in this field since first the forestry idea arose in this country. The creation of the Federal Forest Service was due in no small part to the efforts of those few far-sighted individuals who had

in the early days banded together to form The American Forestry Association. The passage of the Weeks Law, which has made possible the existence of National Forests in the East, was fought long and hard for by the Association. Each year it is broadening and strengthening its activities.

Chief among national issues with which the Association has been recently occupied are the defeat of the Stanfield Grazing Bill, which would have practically given the control of the National Forests to the larger western livestock interests, and the originating and furthering of the McNary-Woodruff Bill. This bill would establish a definite fiscal policy for the creation of additional National Forests in the forest regions east of the Great Plains. Briefly, it calls for a ten-year program of forest acquisition under annual appropriations of \$3,000,000 for the first five years, and \$5,000,000 for the second five years. It is a national measure designed to bring under continuous forest production areas in the forest land regions of the Lake States, the White and Appalachian Mountains, and the South, not merely for such stream flow protection and timber production as the areas themselves may yield, but to serve as object lessons to private individuals and to states in the forest management of the lands represented. This measure demands universal support, and is in line with the spirit and objectives of the Clarke-McNary Act passed by Congress in 1924, an Act which, if we are true to ourselves and our cause, must be made 100 per cent effective.

Although passed two years ago, Congress has failed to appropriate the sums called for by the Clarke-McNary Act. For cooperative fire protection, the bill requested a sum not to exceed \$2,500,000. Last year the sum actually appropriated under this item was \$660,000. With the conviction that the amount did not meet the Federal Government's share of broad cooperative needs, effort was made last fall by some twenty national organizations, under the leadership of The American Forestry Association, to have the budget for the new year carry a fire protective item of \$1,500,000 at least. This effort was finally recognized, but the slight increase finally secured for this activity, came only after further arguments before the House Committee on Appropriations.

A Senate Committee took a summer to thoroughly investigate the forestry needs of the country, and as a result recommended an appropriation of a minimum sum of \$3,000,000 for further acquisition of land,

but the Bureau of the Budget approved only \$1,000,000.

Such course of action brings home the conviction that the Budget Bureau's policy of economy, as applied to forestry, is a policy of deferred expenditure in the Capital City without regard to tremendous current losses in our outlying forests.

Forest fire admits of no delay. If we are to advance in our building of a National Forest policy, according to the plans of the Clarke-McNary Act, we must convert our legislative builders to the truth that stopping forest fire is a capital investment for both state and nation. Until the log of false economy is removed, there is no alternative left for the friends of forestry but to urge upon the Appropriations Committee of the House of Representatives that this item be increased—or if the Committee fails to grasp the urgency of the case to carry the fight to the floor of Congress. Certainly the people of the United States cannot allow the business of tax reduction to be accomplished at the expense of its natural resources.

One of the great reasons for an adequate policy of National Forest purchases east of the plains is the stimulus to private forest practice which will result from observation of well-managed public forests. This, in the eastern mountains, has already been demonstrated. Timberland owners in the South and Lake States need this encouragement no less and we may safely say that everything that can be done by state, federal or private agent will not too soon set to work the millions of idle acres of potential forest soil. Three-fourths of the people of this country live in a region which would be served and aside from their strictly economic value, well-distributed national forest areas would add immeasurably to the recreation opportunities of densely populated centers. We have literally "fooled around" in this matter of national forest purchase, drifting, talking, idling for the past fifteen years because we have had no plan or policy of expenditure. It is high time the work be undertaken in the business-like fashion which will finish it.

To this end The American Forestry Association will continue to urge passage of the McNary-Woodruff Bill by the Senate and to marshal the support of all conservation groups and individuals.

More than a million dollars are needed for carrying out the Federal Government's share of the Clarke-McNary cooperative fire work for the coming fiscal year. The western states are again passing through a season of widespread destructive forest fires. The end is not in sight and signs exist for a severe fall season in the eastern states. The Bureau of the Budget must be made to visualize this need and this responsibility and to avoid the need of deficiencies in fire-fighting appropriations every year. The Association intends to carry this matter to the Budget and to Congress and it entertains hope of enthusiastic cooperation from other interested groups.

Nor in this is the Association unmindful of the wis-

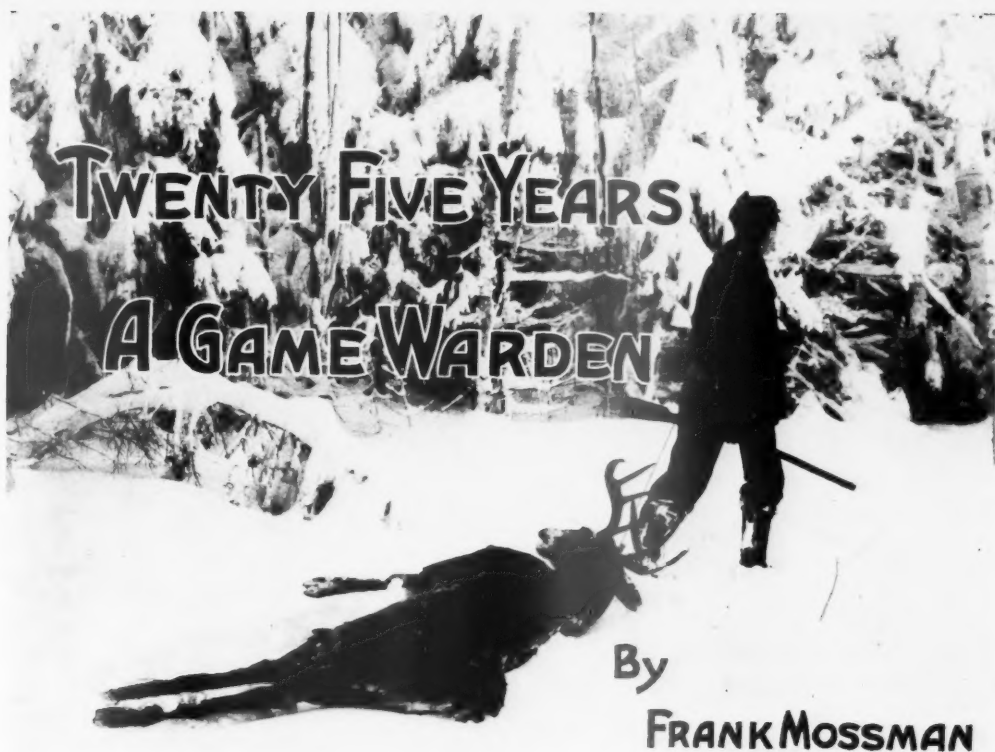
dom of the Budget system and the untiring efforts of the Administration to keep down expense of government. It feels, however, that this policy does not intend and ought not to intend virtually to repeal legislation by failing to allow funds to be appropriated that are necessary to carry out provisions of new laws. This is what has happened, in a measure, in the case of the Clarke-McNary Act.

Two bills creating two new forest experiment stations were passed and signed by the President. One provides for a station in the Ohio Valley and the other for a station in Pennsylvania. The American Forestry Association was active in arranging hearings and securing support for both of these stations and the Acts authorize an appropriation of thirty thousand dollars for each. No actual appropriation has been made in this case so that the stations cannot be established until further legislation making available appropriations is passed.

To such an audience as this I need not stress the necessity for forest research. Our present-day civilization is predicated upon an abundant supply of wood. It is becoming increasingly evident that we must fall back upon the plan of growing the timber here in our own country which we here consume. Our forest problem is one of great complexity. We can use European knowledge and experience only by analogy for we have to deal with an entirely different set of conditions, soil, climate and tree species. The place of these forest experiment stations then is to furnish the technical and scientific basis for the growing of timber crops and to parallel for timber growing the function which has been so admirably performed by agricultural experiment stations for agricultural crops. The system of forest experiment stations must be completed as soon as possible and the work of many of them must be expanded. We must have for our earliest possible use all the knowledge available in order to prevent lost motion in restoring and maintaining our essential forest resources.

Among the states in whose progress toward adequate forestry legislation the Association has been of recent help are Georgia, South Carolina, Oklahoma, Florida and Arkansas. Requests for help from other states are coming in and these will be met to the full extent of the Association's resources and facilities. Special study is now being made of pending taxation reforms in California, Oregon and Washington.

The goal that The American Forestry Association has set for itself is a distant one. Its ideal is the creation of a forest-minded nation, alive to the multitudinous benefits of our forests and intolerant of their abuse or destruction. Its ideal, too, is a system of sound forestry measures throughout the country leading to a nation that will be permanently self-supporting in its forests resources. And The American Forestry Association needs your help to keep everlastingly at it.



Reminiscences from a Long Career of Bringing to Justice Game Law Violators in the Pacific Northwest

TWENTY-FIVE years ago, I became a game warden in the Pacific Northwest. I am still employed in Washington as a warden. It has been my duty to arrest over 700 persons and all but 68 were fined or jailed. People of almost every nationality and of every station in life—from Italian section hands to high state officials—have crossed my path as violators of the game laws. I have arrested ministers, bankers, state officers, U. S. Coast Guards, Forest Rangers, Deputy sheriffs, police officers and politicians, big and little. On one occasion, I was forced to arrest the Lieutenant Governor of our State. Nor have the fair sex been guiltless. Among my most vivid memories is the picture of a beautiful woman in silken hose who tried to shed vampish tears on my breast, and of a large enraged German woman who made me sprint 200 yards in the world's record time.

Patrolling the forest these many years has been a most interesting study of human and animal nature. Politicians have much to answer for in the destruction of our wild life. When politics rule the warden, every step the warden takes brings him up against a political fence erected by his superior officers and places a heavy handicap upon his successful enforcement of the game laws. Human nature and animal nature are sometimes hard to tell apart. Alien section hands, for example, will eat anything from English sparrows to

the biggest game animal in the woods. They don't concentrate on an English sparrow diet, but include all song birds. These wily wops have no pet law-breaking habits, but kill song-birds, game birds, violate fish laws and carry arms unlawfully. In some sections they have killed every living thing for miles along the railroad right of way. In Court they pretend they are ignorant of the game and fish laws and act as cunning as weasels to get off easy. Many times they succeed and it takes long, dreary hours of watching, hidden from sight, in order to get direct evidence to convict them. Out of over one hundred guns I have seized from this class, not one was worth over five dollars. They know their guns will be taken if they are caught, so they get the cheapest old pot metal gun they can find, and after the trial tearfully beg the judge for their old gun, no doubt laughing at the warden and the judge for getting old junk instead of real irons.

One Sunday in company with some other wardens, I caught six of these aliens with a total bag of twenty robins, mostly nesting birds, three nesting grouse, five grosbeaks, ten larks and twenty-five blackbirds. As fast as I arrested one, I threw him in a tool house and waited for the next. At one point the other wops attempted a rescue. I would have shot some of them if the agent had not stopped them. On later search

around the box cars where they lived, we found heads, wings and feet of over one hundred song birds, and this crew had only been in that place for two months. My prisoners in court plead not guilty. Six were found guilty and fined fifty dollars in all. When the friendly justice got out of office I pulled my evidence out of cold storage, filed twenty-two separate charges against this crew, five charges against the "boss," fought the case through and they were fined five hundred dollars. Appeals by their attorneys failed, and they lost in a suit to recover the guns. The foreman attempted to assault me, and while he was nursing the results of our encounter, he was fined two hundred dollars and thirty days in jail for resisting arrest.

I had to take in a Lieutenant Governor once in a "No license" charge. He plead guilty, paid his fine, and was white enough later in his campaign to give an interview complimenting the game warden on his arrest.

To add to the variety I came across a revival minister in Washington, arrested him for flagrant fish law violation. He contributed a fifty dollar fine. The following evenings he waxed eloquent at his revival meetings in roasting the game warden. Men I had arrested

who had never been in a church were drawn by his eloquence. When the plate was passed they contributed handsomely. Two Japs I had arrested joined the church under the impression that the game police were being skidded out of a job by friend minister.

A touching incident took place in an isolated spot along a laughing stream when I arrested a big politician, with a fine creel of trout a couple of weeks before the fishing season opened. He drew out of his pocket a book and a roll of bills and told me to set the price of his freedom and to keep the matter quiet. When this failed, he swore up and down to get a new warden in my place. When I took him before the justice of the peace, "hizzoner" was much disturbed because he intended to run for

another office on my prisoner's ticket that fall. He tried to arrange a deal with me to set the fine if the defendant plead guilty. Well, the defendant plead guilty all right—yes, he got quite humble when he learned that I intended to file eighteen more charges, one for each fish taken, caught or in possession. He got the limit and costs and later when he started a fight against me, which even involved the Governor of the State, the Governor

took my part, complimenting me on law enforcement and favors to no one. All this sounds easy because it ends all right, but the lies, vilifications, Lodge, political and financial pulls and other tricks used by game violators put a burden of mental strain on a game warden that is often discouraging.

Game warden killing has been a sport in Oregon and Washington. Eight or nine men have been killed by game violators since 1912. There is, for instance, the case of Albert Hubbard, shot down while attempting to arrest a violator on Dry Creek, Jackson County, Oregon. Hubbard received a report of deer killing, fell into an ambush and was shot in cold blood as he advanced toward his man with the warrant in his hands. The kill-

ing of an elk in Washington was the primary cause of the deaths of three deputy sheriffs, a game warden, and two other persons, and the terrorizing of a county of 200 square miles for nearly a year and a half. The insane elk hunter, who was a woodsman supreme and a dead shot killed two out of three deputy sheriffs before he, himself, was killed by a third. Even then, the third one did not dare go to see if his shots were fatal until a large posse was called.

In Oregon there is today a class of men who kill and dry deer meat to sell for a living. This state of affairs was so bad in the southern coast country some ten or fifteen years ago that the chief warden would order none of his men to go after these hunters. Some of us went on our own accord, and man-

How Frank Mossman Became a Game Warden

For fifteen years prior to 1900 Frank Mossman was a big game hunter in the Pacific Northwest. Then, in order to provide an education for his children, he gave up his life as a hunter and moved to Olympia, Washington. A short time after he and his family arrived there, a mysterious murder occurred. The sheriff, knowing of Mossman's ability as a trailer of wild animals, deputized him. Mossman immediately took up the trail of the murderer, tracked him out and arrested him. "After years of big game hunting, the thrills of chasing and tracking human beings at once appealed to me," said Mossman. "This experience, together with my interest in wild animals and the flagrant way in which game laws were being violated on every hand, decided me upon the life of a game warden."

In 1901 Mossman was appointed a game warden in the State of Washington. Game violators fear and hate him, and with good reason because he has a record of arrests and convictions that few game wardens can match.

—Editor.

aged to escape injury. One of the wardens I knew had his horse shot from under him and got a bullet-burn across the chest. If we had been shot as often as we were threatened, a cat would have had nothing on us for lives.

I recall arresting a couple of timber claimers, caught killing deer. They had killed and dried thirty-six deer in two weeks. The editor of the local county paper in an editorial advocated running me out of the country for arresting two men because they had merely killed a little wild meat. There was a feud on at the time among the deer killers in the hills and the affair culminated in several persons being waylaid, shot and killed. The entire county resented game wardens and the policing of their game districts. Politics were really the Big Game. No matter how hard a game warden tried to do his duty without fear or favor, he was opposed at every turn by the politicians.

That experience reminds me, too, of a case in Oregon where an innkeeper had a deer, shot out of season, hanging at the back door of his wayside inn. Now the justice before whom I filed complaint was also mail carrier and he ate dinner at the Mountain inn every day, disposing of great chunks of venison steak. He knew what it was, too. A jury to try the case was picked from men who believed in killing a deer whenever they wanted one, regardless of the time of the year. The trial was held at a farm house and the tall, one-eyed constable was there in all his honors, reflecting the glory of his first case in deer killing. A very large badge which the world could not mistake and two six-guns decorated his angular form. Only a dust cloud down the road moved our gaze from the dramatic figure of the constable. When the dust settled, we saw a Justice of the Peace who looked as if he were moving his household effects. Two large saddle-bags hung over his shoulders. Under one arm he carried Webster's dictionary and under the other all the law books he could grip. Later investigation of the saddle-bags proved that they were crammed with legal forms, Supreme Court decisions, warrants, commitments, marriage licenses, United States Patent Reports and Biological Survey Reports on the eradication of the ground squirrel. In fact, his honor was prepared to try any case from a breach of peace to a breach of promise. Next came the attorney for the defense. He was not as well-armed as the justice, but no less picturesque. He was astride a little burro which under his two hundred pounds was just about visible.

Court was called. His honor put Webster's dictionary on one side of the table and the United States Patent Reports on the other. In the middle he placed the rest of his law library and legal supplies. The justice took a large chew of tobacco. Then the attorney for the defense coughed loudly and asked the court to discharge his client on the charge of possessing deer, as deer was hung on a sour apple tree and

court should know that deer to be in possession would have to be in the arms or the pockets of his client. Here the justice opened Webster's dictionary, took a long look and said, "The point is well taken; the defendant is discharged."

Then there was the arrest that I called the case of wheelbarrow justice. I brought in a half-breed Indian who had a fine spike buck deer in his possession out of season. I took the half-breed before the Justice of the Peace in the nearest mountain village. I learned later that the justice was the wheel around which the town revolved. Besides being the Justice of the Peace, he sold real estate, was Director of Schools, was the undertaker and owned the cemetery, had a half interest in the livery barn and ran the town council. It was just before noon when I filed my complaint against the half-breed. The justice asked me to postpone the case until after lunch.

In the afternoon I appeared before the justice with the half-breed and his spike buck deer. As I entered the Justice's office, I fell over a wheelbarrow near the door, covered with a canvas sheet. The half-breed plead guilty and the justice fined him fifty dollars. This done, the justice arose, picked up the deer, placed it on the wheelbarrow and without a word wheeled it home. He did not even invite me to dinner!

The next case I brought before him I changed my tactics. I had arrested two men who had killed two fat bucks illegally. These I hid several miles from the village, notifying the justice in advance that I was bringing before him two men for violation of the game law. When we arrived at the justice's office, sure enough, there was the wheelbarrow at the door. The men plead guilty and paid their fine and the justice was greatly put out by the absence of any deer. He called in his constable and had him search my buggy at the livery stable. I said nothing, but when the case was over, recaptured the stolen deer and proceeded homewards, with the spoils of war, to my own family.

A number of years ago, I happened to hear shooting near a Chinese vegetable garden, in Olympia, Washington. I saw several quail fall, went over and arrested Un Hung, Chinaman, but search as I might I could find no quails. So I took the Chinaman and the gun down to Justice Court and charged hunting out of season. Un Hung denied everything. He said, "Me gettee gun—shoot hawk—Game Warden gettee me." Just as the judge was about to discharge him, the Chinaman got right in front of his honor and in talking threw both his arms out. To the court's astonishment, out rolled three fine little quail right into the Court's lap. Un Hung had a wide sleeved jacket. Here he had hidden the quail until he forgot them in the wildness of his gestures.

I must not forget the case wherein I got a sour milk bath years ago. I was then a young game warden without so much experience. There was a German called Bittenbender, killing game near Olympia, Wash-

(Continued on page 610)



Game Animals of N

LURE OF THE HUNTSMAN—HABITANTS

1---The Great Grizzly—monarch of his kind—and rapidly becoming extinct due to lack of sending out his call; 3---Master of the Crag, the Mountain Goat (this photograph was m graphs of mammals of the world in their natural habitat); 4---The Bull Moose; 5---L; 6---The White Sheep of Alaska; 7---His Majesty, the Mountain Sheep (photograph by victim of its own fatal curiosity and preference for the open (photograph by K. D. Swa pletely exterminated and now saved to posterity through the most rigid protection; 10---T



3

als of North America



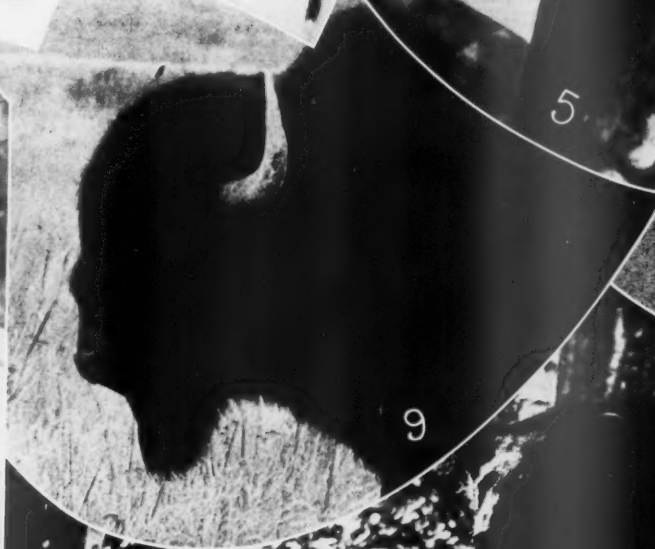
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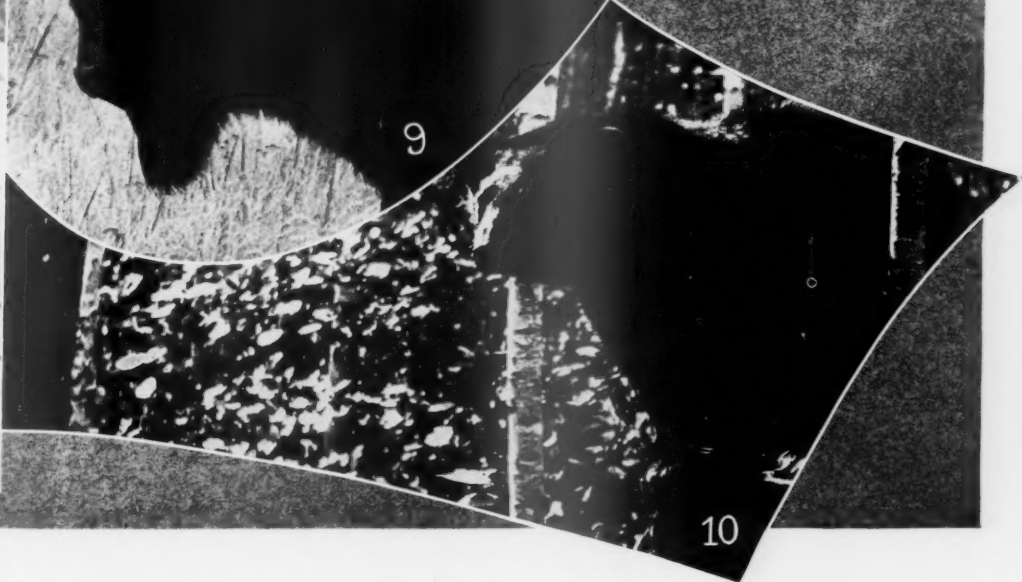
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HABITANTS OF THE WOODS AND WILDS

inct due to lack of protection (photograph by H. Armstrong Roberts); 2---The Bull Elk, photograph was made by John M. Phillips and won the first prize in the exhibit of photo-
all Moose; 5---Lynx, known also as the Bob-cat or Wild-cat (H. Armstrong Roberts);
p (photograph by Hileman); 8---Mule Deer, favorite game of the hunter and often the
ph by L. D. Swan); 9---The American Bison, one-time king of the plains, nearly com-
protection; 10---The Black Bear, an interesting citizen, affording good sport to the hunter.

ington. I arrested him and took him before a justice where he began to cry like a baby. He told the justice his wife was very sick—dying in fact—and that he was a poor man. The justice had a big heart. He asked me to dismiss the complaint. I refused, as I knew the man was very well to do. In a burst of pity, his honor ordered me to go to Bittenbender's home and interview the dying woman, look into the man's financial condition and report that afternoon back in Court. I had never met the German's wife, but I concluded that since I represented His Honor, I would uphold the dignity of the court. So I locked my prisoner in the county jail after he had telephoned his wife in German that the game police was to call on her. Then I went home, put on my Sunday best and in the course of an hour was knocking at the door of Bittenbender's home. The door flew open, and a giant of a German woman stood filling the doorway. She appeared very much excited. Her 300 pounds of flesh seemed to shake and quiver. In one hand she held a rolling pin. Maintaining my dignity, I said, "Pardon me, but am I addressing Mrs. Bittenbender?" At this the woman threw the rolling pin at me. I ducked but the pin ducked me, for it hit a large crock of sour milk on a shelf of the porch just behind me, drenching me from head to foot with its soft, creamy contents. "Vere un hiel iss my hoosband?" the woman fairly screamed. At the same time I noticed a German police dog as big as a Jersey calf just behind her and trying to get past her and out of the door. Suddenly Mrs. Bittenbender stepped aside and said: "Soak hum, Blootch!" I concluded my report to the Justice was already overdue. I started for the gate in a hurry and beat the big dog there by a nose. I took the gate, hinges and all right with me but there was no escaping that German war dog. Self preservation forced me to shoot him and as he lay puttering out his last kick, I looked up. Here came Mrs. Bittenbender, her skirts pulled up so they would not im-

pede fast travelling. I just had time to note that ladies styles in large German hose that season were roan in color and very large. I resumed my haste to make my already much-delayed report to the Honorable Justice Court. At that, the woman nearly caught me in the first two hundred yards of my sprint toward the hall of Justice.

When I arrived in Court I looked like I had been in a milk train wreck. I had lost my hat. My Sunday suit was sour milk and dust. I had one black eye where the gate kicked me en route. The justice seemed to be overcome with joy at my return. In fact he looked at me and laughed so hard that I could not make him hear my already overdue report on the state of Mrs. Bittenbender's health. When the justice recovered his hearing, I stated that "the lady" seemed—and acted—quite well. Bittenbender was brought into court and fined the limit. I then swore out a warrant for Mrs. Bittenbender and took the warrant to the Sheriff. The Sheriff was a good friend of mine. I asked him to kindly bring the woman in, as I was very busy. The Sheriff looked at my swollen eye and ruined clothes, called in four of his big deputies and brought Mrs. Bittenbender before the Court. She paid in all \$180 in fines and costs.

This incident occurred early in my career as a game warden and enemies of game law enforcement made the most of it to ridicule me. One paper published a story to the effect that I was sitting on Mrs. Bittenbender's lap, that her dog had become jealous and attacked me, whereupon I jumped into a tub of sour milk and had to shoot the dog to save myself from drowning. There were fifteen or twenty varieties of the story current for weeks afterwards, none of which redounded to my credit.

All of which goes to show that in order to stick at the job of being a game warden, a man must have a sense of humor.

(To be Continued.)



How Many Hunters Per Duck?

By C. A. RINDT



EACH fall, as the hunting season draws near, I discuss, with anyone who will discuss with me, the merits of the different hunting grounds that it is possible for us to go to. It may be necessary

next year to take a week off to go hunting. Even now it always takes a few days and a car is absolutely necessary. And each year we have bemoaned the fact that game is so scarce; through every hunting season there arises a wail from the sportsman deploring the way in which the men who hunted before us killed off the game. If we were given the same abundance of game they had, there would be no accounts of game slaughters, the wild pigeon would not be extinct and the wild turkey would still be hunted from the Gulf of Mexico to Canada. Now they are gone. Yes, it is too bad.

But every fall each individual seems determined to get his share of what is left. Everyone who can, packs his gun in the back seat of his car and steers for the lakes and woods. All who can not, wish they could. I, like all the rest, have always wanted my share and on the day before the hunting season opened last fall I packed my gun, hunted up my hip boots and hunting coat, collected my friends and was off.

We reached the marsh in the evening and spent a cold night in a shack that used to be a perfectly good cabin. Before daylight we were up eager to get our share of what was left of the ducks. We washed on the bank of a stream in the cold morning air, cooked the usual bacon and flapjacks for breakfast and were off to the marshes before sunrise. The first water we hit reminded me that I had forgotten to patch a hole in my boot. But that did not bother long for the water was so cold that soon I could not tell whether or not I had any foot at all. We



H. Armstrong Roberts

WE HAD THE GREAT EXPANSE OF MARSH AND SHORE LAND TO OURSELVES—SO WE THOUGHT

were lucky, we discovered, for we had the great expanse of marsh and shore line to ourselves. We separated and I was left alone in the grey dawn in wild rice and rushes which were up to my shoulders. I crouched down in the thick growth waiting for the sun to rise. At last it emerged over the horizon and at the same time a duck arose from somewhere and started across in front of me. I took careful aim and was about to pull the trigger.

"BANG!" There was an explosion ten feet behind me.

By the time I recovered from the shock, the duck was out of range and had been missed by fifteen or twenty hunters who came up out of the weeds from nowhere. The duck passed safely out of sight in the morning mists but the reports of guns marked its flight the length of the marsh. Then the war began. As the mists cleared, duck boats took form out on the bay and ducks were scared up from numerous places, but there was a battery of guns for every duck. Occasionally a duck would drop and some-

one would start out through the weeds to look for it. I determined that I would get the next duck that came within range of my gun. As one came towards me, I slowly raised my shoulders above the weeds and was about to shoot when a shower of shot hit my back and a duck dropped a few feet behind me. I looked around and saw a man with a bulldog set to his jaw, coming for the duck. Immediately I decided that place was too hot for me and started in search of the rest of my party. By noon we had all found each other and discovered that between us we had three ducks.

On our way back to the car, we met a man strolling along the beach with a little water spaniel walking beside him. There were also a hundred or more

other men walking on the beach, but this man was dressed in overalls and wore a battered felt hat, quite in contrast to the uniforms of sportsmen. He had eleven ducks hanging from his belt. Even this we thought might be possible if a man was a good shot and had good luck. *But he had no gun!* Our curiosity was aroused and after asking him many questions, he parted with the information that before long he would have twice that many and that even then there would be many that the dog would not find. "What is the use," he said, "of wasting shells when so many birds are killed and lost in the marsh or are wounded and get away to die?"

Meekly we went on our way. We had used over fifty shells and had three ducks.

Shade Tree Conference Huge Success

FORESTERS, entomologists, tree experts, landscape gardeners and architects, State and Federal officials, gathered together at Philadelphia, August 2 and 3 to attend the Third Shade Tree Conference. Over fifty delegates were in attendance to discuss questions relating to the care and welfare of those tree species that have come to be used for shade and ornamental purposes.

With headquarters at the Hotel Bellvue-Stratford the Conference was so arranged that almost the entire time of the two days was devoted to examination and discussion of actual conditions as they were shown to exist on the ground.

Leaving the hotel early on the morning of August 2, the two bus-loads of delegates were driven through Fairmount Park—the largest municipal park in the world—where methods of planting and the success attendant upon these methods were explained by Mr. S. N. Baxter, landscape gardener of Fairmount Park. Stops were made to examine and comment on the leaf and twig blight of oak and sycamore, as well as diseases of beech trees and treatment of the golden oak scale. The work of leading tree surgeons was shown and described by recognized experts in this line.

The partly lunched at the DuPont Hotel at Wilmington and spent the greater part of the afternoon examining the arboretum and the greenhouses on the P. S. DuPont estate. Results obtained from tree feeding and from spraying were among the interesting points examined during the first day's excursion.

In the evening, addresses were made by Major R. Y. Stuart, Secretary of Forests and Waters for the State of Pennsylvania; S. L. Mulford, Horticulturist of the U. S. Department of Agriculture; and Dr. E. P. Felt, authority on shade tree insects.

The morning of the second day was given over to examination of the larger estates north of Philadelphia. Luncheon was served at Trenton, where the delegates were addressed by C. P. Wilber, State Forester of New Jersey. Mr. Paul Davey read an exceptionally interesting paper on research with regard to shade trees and the need for its expansion. Doctor J. Franklin Collins spoke on methods of case records in tree treatment. Officers elected for the next Conference are Doctor E. P. Felt of Albany New York, Chairman, and W. O. Filley, New Haven, Connecticut, Secretary. The Fourth Conference is to be held in Washington, probably in the late fall of 1927.



DELEGATES TO THE THIRD SHADE TREE CONFERENCE

A Plan to Coordinate Conservation Interests

By ARTHUR C. RINGLAND
Secretary, National Conference on Outdoor Recreation

IT must be apparent to everyone that there is a mass movement, national in scope, toward a more general use and enjoyment of the outdoors. General business prosperity, cheap motor transportation and the development of roads have afforded leisure time and means for its enjoyment to an extent never before experienced in this country. They have created a great and wholesome social force. Expenditures for outdoor enjoyment now run into the millions of dollars and present important economic aspects. It follows that intelligent guidance and plan-wise measures are necessary if the public is to receive the greatest benefits. A national recreation policy for the out-of-doors must be developed. Fundamentally this is a question in land economics and in education—what lands to set aside for recreational enjoyment and how to use them? And the problem must be considered in terms of increasing population with consequent economic pressure to maintain accepted standards of living. Today an ever increasing population is making insistent and continuous demands upon the diminishing outdoor resources. If we are not adequately meeting the problem today, how can we meet it when the country reaches its optimum population of not less than two hundred million? It can be met only by nation-wide outdoor planning, undertaken now. The nation is today a close knit social and economic entity. Coordination of effort is therefore patently necessary. The general public is receptive. President Coolidge took the initial step when he called a conference of national outdoor organizations in May, 1924. A permanent organization was perfected, supported on the one hand

by an Executive Committee representing the national organizations, and on the other hand by a President's Committee of Cabinet members representing the Federal Government. Coordination of national and federal effort is therefore under way and functioning. But that is not enough. President Coolidge in extending his invitation to the initial conference particularly emphasized the necessity to work out a national policy which will coordinate the activities of federal, state, county, municipal, and unofficial local agencies in the field of outdoor recreation. The immediate task now is to focus the picture on the political agencies other than Federal—particularly the State.

Much is heard today of State rights. If we think more of State duties and responsibilities and less of rights we shall construct a sound political philosophy and do much to bridge the present antithesis between the Federal and State Governments. So the development of a national recreation policy depends then in large degree upon the redemption of the responsibilities of the collective States. For example, it is the responsibility of the Federal Government to provide and develop, for the use and enjoyment of the whole people, outstanding exhibits of primitive nature as National Parks; National Forests for the protection of the watersheds of navigable and interstate streams; sanctuaries and breeding refuges for migratory wild-life and exhibits of game and fur-bearing animals of national importance and interest; and arterial highways of interstate importance.

But it is to the states we must look for the full fruition of a recreation policy and for the promotion



THEODORE ROOSEVELT
Chairman of the Committee on Coordination of State Outdoor Activities of the National Conference on Outdoor Recreation.

and development of the land, water, forest, plant, scenic, or wild life resources within their borders. Likewise we must look to municipal governments for recreational facilities for congested centers of population. The collective and coordinated action of Federal, State, County and Municipal Governments then make recreation possible for the whole people. It can be accomplished in no other way.

Secretary of War Davis, Chairman of the President's Committee on Outdoor Recreation, said: "I want to emphasize that although the contribution that the Federal Government can and should make is great, yet an effective national recreation and conservation policy can be worked out only to the extent the states and minor political agencies share in its making. Seventy-five millions of our population live east of the Mississippi where Federal control of land is relatively negligible and where practically all land is in private hands. Here the States must lead. It is not a question of State rights, but of State responsibility."

Aside from national organizations there are some thousands of state and local outdoor associations. Although these have common objectives their efforts are not coordinated. Coordination is essential for the development of intelligent public opinion and for the enactment of sound legislation. This coordination should be perfected within the various political units—the municipality, the county, the State and the Federal Government. Likewise for various reasons there should be regional coordination between neighboring states where natural conditions of forest, plant, water and wild life resources are similar.

In 1925 the Western Outdoor Life Conference at its Spokane meeting proposed a group organization by geographic divisions of all wild-life agencies—official and unofficial. This action was favorably approved by the International Association of Game, Fish and Conservation Commissioners at their annual convention at Denver, Colorado, the same year. By resolution of this body the National Conference on Outdoor Recreation was specifically asked to undertake the sponsorship of such an organization.

It has been suggested that while in its conception the idea seems to have been intended to apply specifically to game and fish preservation there would seem to be no reason why it could not be expanded to include the entire field of conservation. With such an inclusive plan in mind, the Executive Committee of the National Conference on Outdoor Recreation has appointed Colonel Theodore Roosevelt as chairman of a committee on the coordination of state outdoor organizations. The objective is to secure cooperative action in advancing the common purposes of outdoor organizations and proper consideration and concentration of opinion upon questions affecting the conservation, administration, and use of the land, water, forest, plant, scenic, and wild life resources of the state and

through the state those of the nation. The suggestion envisages a series of working plans for the highest development of these resources using congested centers of population as nuclei and embracing the rural and wilderness areas of each state; the coordination of these plans regionally with neighboring states; and finally nationally with the Federal Government through the National Conference on Outdoor Recreation.

It is proposed through men temporarily selected to act as chairmen to invite in conference representatives of all local and state-wide outdoor organizations; wild life, parks, forestry, highways, waterways, major education, scientific societies and institutions, tourist and travel bureaus, chambers of commerce, railroads, hotel associations, automobile clubs; athletic, outing, hiking and mountaineering clubs; boys and girls organizations; municipal and county parks, playgrounds and recreation associations; regional planning associations; and interested bureaus of municipalities, counties, and state and Federal departments within the state. It is proposed that these representatives should set up select committees on policies and plans covering each district and vital phase of the recreation and conservation problem of the state.

It will be the duty of these committees to prepare a program of the outstanding objectives within their field. These plans are then to be brought together by an executive committee composed of the chairmen of all of the select committees with state and local Federal bureau chiefs sitting on the executive committee as ex-officio members. Out of such organization there should be developed a plan representing the common interests of the state and the various state organizations as well as policies and programs of national application where Federal action is necessary. Moreover, the executive committee can coordinate its efforts with the corresponding executive committees in the neighboring states particularly where natural conditions are similar.

The remarks of Mr. Carlos Avery, of the American Game Protective Association given before the Second National Conference on Outdoor Recreation last January are pertinent: "To anyone who has been concerned in national or even sectional activities relating to the protection of wild life for any considerable time, the most outstanding fact is undoubtedly the lack of cooperation and coordination among the groups, agencies, and forces, all of which may be working toward the same end but more or less independently and by diverse routes and varying methods.

"Such a lack of harmonious effort results in multiplicity of programs, duplication of effort, lost motion, conflict, friction, varying conclusions, dissatisfaction, and delay. In the field of legislation there is a woeful lack of harmony in state laws even in the same general section and where conditions may be similar. This is due to a lack of contact and conference and often to lack of knowledge of the funda-

mental principles and purposes of conservation."

In great national projects which may or may not involve Federal legislation there is much of the same sectionalism, the same lack of unity and harmony of effort. This arises less from want of patriotism than lack of understanding, the result of isolation and an absence of the means and machinery of conference and full consideration and knowledge. The means for correcting this condition must apply the principles of true representative government. The plan outlined seems to do this. It affords opportunity for the institution of projects from the bottom—that is, in the local associations and clubs away back in the rural

frontier—and to submit all such proposals to the test of district group conferences and finally to a general conference. Any proposal which is sound enough and meritorious enough to run the gauntlet of all this scrutiny and dissection would certainly be entitled to the consideration of this great conference.

A proper conception of the function of such a group organization involves almost limitless opportunities for service. It doesn't aim to supersede any existing agency but offers a means of coordinating effort and of translating the worthy aims and projects of all into actualities thus making for efficiency, economy, and accomplishment.



Winners in the Photographic Contest

The joint Photographic Contest closed on September 1. From the many hundreds of photographs received it was a task of no little proportion to select the winners. Pictures came in from all sections of the United States. Woodland scenes, water views, forest activities, wild animals and some not so wild, flowers—in fact a photographic slant on almost every phase of the out-doors.

The winners of the Cover Page Contest whose entries have been selected as suitable for use on the cover of AMERICAN FORESTS AND FOREST LIFE, are Mr. Karl Fitchner, Philadelphia, Pennsylvania—First Prize, \$25, for his "Winter a la Mode"; Mr. Prentiss N. Gray, New York City, Second Prize, \$15, for his "Deer in the Forest"; and Miss Mary Callaghan, New York City, Third Prize, \$10, for her "Breakfast in the Woods." Mr. Fitchner's photograph will appear on the cover of a forthcoming number.

Curiosity Contest Winners

Equally difficult was the selection of the curiosity winners. Many queer and unusual objects posed for the cameras of those interested in this Contest. However, after much discussion on the part of the Judges, the First Prize of \$10 went to Mr. William G. Hartmann, of San Francisco, California, for his photograph of a square lake. Mr. Cyril E. Lamb, residing in Ypsilanti, Michigan, received Second Prize of \$5 for his picture of "The Tree Man," and Mr. T. R. Littlefield, Ogden, Utah, submitted a picture of a two-headed rattlesnake that wriggled off with the Third Prize, a fifteen month's subscription to AMERICAN FORESTS AND FOREST LIFE.

In concluding this Joint Contest which proved so popular, the Judges wish to express their appreciation of the efforts and care given by the many photographers who made the Contest such an outstanding success.

The winning photographs will appear in later issues of AMERICAN FORESTS AND FOREST LIFE.



EDITORIAL

"Worse Than a Crime—A Mistake"

MANY of the mistakes of this generation may seem in their tragic consequences little less than criminal in the eyes of generations to come. Some mistakes permit of no remedy—the damage is irrecoverable.

As custodians of wild life our mistakes have been many. For in this complex world of ours, with its myriad unknown and interdependent forces, only omniscience can foresee the far-reaching effects of man's interference. At some expense we have learned caution in tampering with the delicate balance of our social structure. But we have not yet learned the need for the same caution when dealing with nature's balance in the world of the out-of-doors. Already here and there man has destroyed this balance utterly. He has over large areas profoundly modified it. But back in the hinterland of forest, field and woods a balance still exists that is well worth preserving.

In this issue Henry R. Carey pleads for maintaining this balance; for the necessity of withholding a destructive hand toward any kind of wild life until we know what the result of man's interference may be. It is a word of caution well taken. There is an insidious facility in recommending campaigns of extermination. Hawks have been found destructive to poultry? Destroy all hawks! Mountain lions kill live stock? Exterminate all mountain lions!

Nothing, apparently, could be simpler and yet nothing in the long run could probably be more inimical

to our wild life. "Not having omniscience," says Mr. Carey, "man cannot experiment with living creatures as he can with chemicals in a test tube. If the chemistry experiment fails, more materials are at hand for a fresh attempt. But if the venture with a race of living birds does not succeed and the race is wiped out, all the test tubes in the world will not replace the complicated organism, itself a balance of nature's forces which was the work of ages of slow growth.

"Let us beware of flattering ourselves into a belief that because we have begun to understand and control electricity we can successfully guide the destinies of the living creatures of the world. That may come in the distant future but certainly not until we know much more about the nature of life itself."

So we may well pause amid these clamors of "Get rid of this—exterminate that" and confine ourselves to measures of local control until we learn a little more. Today we do not know enough to undertake safely any experiment of extermination, for many of the apparent villains in the wild life drama may yet have their necessary parts in nature's eternal economy. In terms of human happiness and human welfare the importance of our wild life increases as the years pass. We who today enjoy our brief loan of life on earth are not earth's last generation. Ours is a strict obligation, for in Mr. Carey's words, "We hold the wild life only in trust."

How Long?

ONCE more we read that fire has threatened earth's oldest living things. News dispatches during the past month have told more than once how forest fires are menacing our redwoods and sequoias. Late in August, flame leaped the Kaweah River and burned up to the very edge of Muir Grove before its advance was overthrown. Six hundred men fought on the fire line to repel it. A few days earlier the Superintendent of the Sequoia National Park declared that many of the huge trees in his care were doomed unless a fire near Badger, California, could be brought under immediate control.

Not always is man successful in repelling the red

enemy. In 1919 a forest fire entered the California Redwood Park, where it was fought for a week by several hundred men, and in the end brought about the death of over a hundred of the world's greatest trees.

"Great trees were falling all night," said one of the Park rangers, in describing the holocaust. "When they fell they could be heard a mile and a half. The redwoods that have fallen run to six feet in diameter and are from two hundred and fifty to two hundred and seventy-five feet high. They were from 1,500 to 2,000 years old. An irreparable loss."

So, year after year, one reads of the destruction or

of the close escape of sequoias or redwoods—those great monuments of nature which exist nowhere else in the world. How long the American people will suffer these sacrifices on the altar of carelessness only the American people can decide. Forest fire fighters of the West hold no illusion that they can safely protect our woodlands unsupported by vigorous public opinion backed up by adequate laws and vitalized by intelligent cooperation. More and more each year we are turning to forests

and woodlands for our playtime. Unless we can turn these ever-increasing numbers from liability to asset, from hazard to guardian, the future of our forests in many localities is hopeless.

Fire fighters—federal and state—can take care of the few fires of extra-human origin—"the acts of God." But only an enlightened public opinion and a sentiment that will no longer tolerate such costly carelessness can cope with the multitudinous fires that come as acts of man.

A Need—And a Plan

THE spectacular advances in transportation that our last decade has seen, definitely bring to an end an era when each community or municipality was able more or less to provide its own recreational resources. Our increasing moments of leisure, our greater dependability on the out of doors no less than the tremendous widening of our travel facilities have created the need for nothing less adequate than a nation-wide policy for development of the recreation areas of the country. The United States itself must serve as our unit in planning the playgrounds for a nation.

And yet perhaps in no one field of activity has there been less coordinated effort or less plan-wise progress than in this field of outdoor recreation. Like little isolated islands, states, districts and municipalities have been desultorily working out their own immediate problems with little regard for the interrelated problems that exist just across some imaginary line. So it is that there has resulted an immense amount of duplication, of ill-directed activity and ineffective expenditures of funds.

Conservationists, sportsmen and outdoor enthusiasts of every kind had long pondered the problem. There was need for haste since already a kind of crazy quilt patchwork of heterogeneous local policies were being put into effect. The need was for a national viewpoint.

The first step was taken when President Coolidge in 1924 called a conference of national outdoor organizations. The result of this conference has been to coordinate the efforts of the various federal organizations having custody over our public lands. This was a step. It was a step, but as Arthur C. Ringland, Secretary of this national conference, points out elsewhere in this issue, it is high time to bring in the other agencies that have to do with the shaping of recreation policies.

"A national recreation policy for the out-of-doors must be developed," says Mr. Ringland. "Fundamentally, this is a question in land economics and in education—what lands to set aside for recreational enjoyment and how to use them? And the problem must be considered in

terms of increasing population with consequent economic pressure to maintain accepted standards of living. Today an ever-increasing population is making insistent and continuous demands upon the diminishing outdoor resources. If we are not adequately meeting the problem today how can we meet it when the country reaches its ultimate population of not less than two hundred million? It can be met only by nation-wide outdoor planning undertaken now. The nation is today a close-knit social and economic entity. Coordination of effort is therefore patently necessary."

There are, as Mr. Ringland points out, some thousands of state and local outdoor associations, all possessing common and similar objectives but lacking the coordinated effort to bring these objectives to fruition. Certain states, certain communities have gone farther toward classifying their land for this or that purpose than have others. Some have thought more than others in terms of recreation needs. Yet without a central agency and clearing-house such as Mr. Ringland suggests it will be next to impossible to put to practical use the results of the experiences and efforts of these states. Each must be left to blunder on, working out its own salvation as best it may.

Mr. Ringland's plan would place these activities on a plane never before attempted and give them a range of utility far in excess of anything now known in that field.

"The objective," he says, "is to secure cooperative action in advancing the common purposes of outdoor organizations and proper consideration and concentration upon questions affecting the conservation, administration, and use of the land, water, forest, plant, scenic and wild life resources of the state and through the state those of the nation. The suggestion envisages a series of working plans for the highest development of these resources using congested centers of population as nuclei and embracing the rural and wilderness areas of each state; the coordination of these plans regionally with neighboring states; and finally nationally with the Federal Government."





WAITING FOR THE TRAFFIC SIGNALS TO CHANGE

The Beaver's Breakfast

By VICO C. ISOLA

IN the State of Maine, along one of the main arteries of travel from the Land of Liquids to the Land of the Free, there is a stretch of road some ten miles in extent that is noted for its narrow ways, sharp curves and close proximity to the river's edge. In spite of the fact that this bad piece of road is well known the urge for speed and the get there desire was the cause of three or four deaths last summer and many other accidents of more or less serious nature. Last fall the highway officials performed considerable work along this way to try and keep the death

and accident rate down during the coming tourist season. In places along the river bank and near ponds where the slope was precipitous and where the road ran close to the banks they put in heavy logs along the edge and surmounted these with pole fences and guard rails. For these rails they used wood that lay nearest to hand and in most cases this proved to

be poplar and white birch.

All of us think of the beaver as a more or less extinct animal which used to inhabit the northlands. With those of us who have journeyed into the depths of the north and seen beaverdams and workings the im-



THE BEAVER'S VORACIOUS BREAKFAST APPETITE WAS RESPONSIBLE FOR THE CUTTING DOWN OF LONG STRETCHES OF TOP RAILS AND POSTS

pression has always been strong that these animals are extremely shy. But it happens, due to state protection, that beavers are not as nearly extinct as we might think and further, like the horse, they have become accustomed to the automobile, taking that blustering vehicle more or less as a matter of course. At one point along this road there is a pond inhabited by beavers — house and everything — where cars are passing at all hours of the day and night and where still the beaver live on apparently unaffected by travel.

Shortly after the work on the road had finished and the guard rails had been erected one or more of these beavers must have been out on a search for food, for to the amazement of passing motorists, the white birch and poplar fence posts and guard rails commenced to disappear. The ends left showed the unmistakable stubby pencil point



UNMISTAKABLE BEAVER WORK—THE EVIDENCE THAT CONVICTS. HERE THEY WERE CUTTING IT UP INTO SHORT LENGTHS FOR THE BEAVER KIDDIES!

end that spelled beaver. Due to the steepness of the bank on the pond side of the fence it was necessary for the beaver to stand right in the highway. No one has seen these animals working on the fence, still with the frequency with which cars were passing and the amount of fence taken down in any one night, the beaver could not have returned to the water and back again between the passing of each car and accomplish as much as they did. They must have done no more than to scurry over the bank out of sight when an automobile approached and then step right back onto the job the minute it passed. This would seem to show that we can get used to anything provided there is enough of it and that even the sup-

posedly shy beaver is coming abreast of the times. Who knows perhaps too there are flapper beavers who bob their hair and roll them just like the kids at home.

Lions and Arrows

(Continued from page 594)

all seemed frightfully near and grewsome. Cold waves of air seemed to traverse up and down the back of my neck and my pulse went racing.

Arthur Young crept to the aperture in the blind without a rustle of grass or snapping twig, and stealthily looked at the crouching beast. He motioned to me, and there beneath the tree in the dim light of the moon I saw the great lion lying not fifteen yards away feeding upon the bait.

We braced our bows, nocked our arrows, and drawing to the head as one man, we loosed the deadly shafts. We struck! There was a roar and the great beast with one bound landed before our blind. He was so close we could have touched him with the bow. Towering magnificently with blazing eyes and mane erect I thought he would crash through our thin screen and strike us dead.

It was but the flash of a picture as we dodged below the opening. But something misgave him. He turned and galloped away. As he did so I saw the feathers of

an arrow deep in his side and heard the blood rattle in his throat.

He disappeared in the night. We heard him fall, break the arrow in his teeth, then give a long deep moan. Many weary hours we waited for we dare not yet go out. The moon crossed the heavens, the cold winds blew. Nights are long in Africa.

At last the dawn bird piped his wakening notes and the heavens grew pale in the east. We stole carefully out of our blind. Peering all around we walked up to our trophy. As we neared him we tossed little clods of earth at his prostrate form to make sure he was not sleeping. He had traveled sixty-nine paces. The wind blew his heavy mane gently to and fro, as we came to his side. There he lay with Young's broadhead shaft through his chest above his heart, stone dead.

There was the finest lion in Tanganyika, killed in less than fifteen seconds with one arrow.

I grasped the hand of Arthur Young as we gazed on the greatest trophy of our African adventure.

To Whom Does American Wild Life Belong?

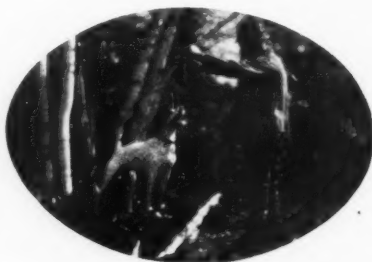
(Continued from page 582)

reproduction from unhealthy parents. One of the most plausible hypotheses explanatory of the occasional outbreaks of disease among the grouse of Scotland has been the extermination of these correctives, the disease being most virulent where the game keepers were most active in destroying what they considered vermin." Surely it is better to share the game with the hawks, than to lose all with the disease microbes.

It is therefore doubtful, to say the least, whether it pays, economically, to tamper with the Balance of Nature, either by introducing foreign species, or by exterminating the native. Wipe out the mice, and the game birds will suffer. Kill off the game birds and the sportsmen will complain. Exterminate the hawks and the mice will destroy the farmers' crops. The utmost that mankind ought to do is carefully to control aggressive species, and gently to encourage the weak. England no longer persecutes her few remaining eagles, or her "noble peregrine" falcon. She realizes that she has made a mistake, and her policy of destruction has been reversed. How long, oh Lord, shall America presume to rectify the work of Thy Hands in the wilderness? How long shall fools rush in where angels fear to tread? The Nature lovers are awake, and will defend their rights. Their interest and everyone's interest is

that Nature be left to herself. They demand that every living native creature be protected from extermination. They demand an end to the persecution of our herons and kingfishers, the life of our wilderness streams. These too, have been dubbed "vermin" by the sportsmen, but, as has been well said, "it is a poor and weak policy to try to turn public opinion against a bird by giving it a bad name!" Our complaint against the Nature-wasting type of sportsmen is not that they enjoy themselves, but that they steal happiness from others, through their rudimentary and barbarous notions of what enjoyment means. The outdoors does not belong exclusively to the gunners and fishermen, nor to any single class. It is not right that hawks, owls, herons, kingfishers, and even the American eagle should go, because they kill a few pheasants, grouse, quail or fish. Conservationists and Nature-lovers are taxpayers and support the game laws. Let them have their returns.

The outdoors belongs to all classes who use it intelligently. The waster of wild animal life should be run out of the woods like the spreader of forest fires. Both must be awakened to their responsibilities. After all, we hold wild life only in trust for those who come after.



"The 'Possum Hunt"

A True Ghost Story

By E. S. WADDELL

ONE cold dark morning, just before dawn in the late autumn, I rose, and hastily slipping into my clothes, tipped cautiously down stairs in my stocking feet for fear of awakening the household. My faithful negro boy, Sam, was awaiting me outside with a torch, and at my greeting:

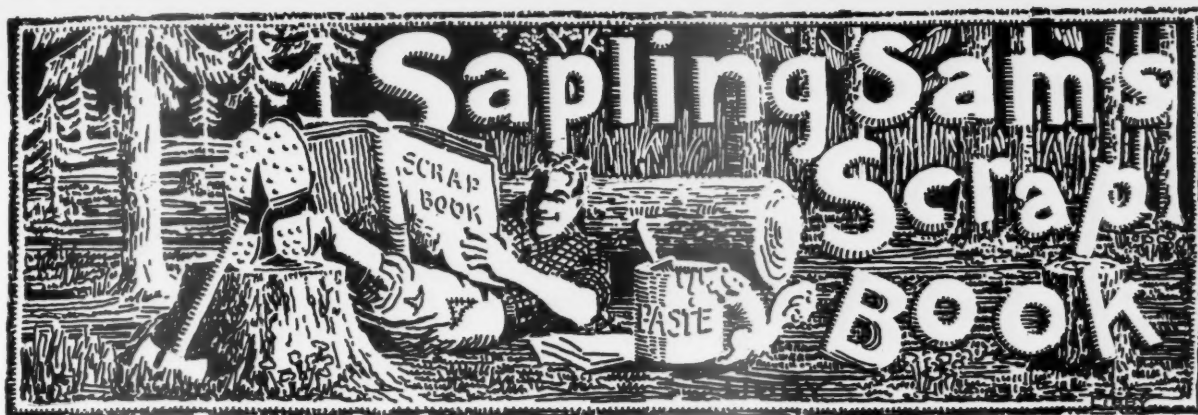
"Well, Sam"—

"Yassir," he replied, "I glad you come, cos dem dog gwine make deyself known tereckly and wake up de house. Dey know whats gwine on. I got 'em down yonder by de gate."

We found them, as usual, wild with the prospect of an exciting chase, and so, with the dogs bounding ahead of us, we were soon in full swing across fields and meadows, until we struck the beautiful woods bounding our plantation. This piece of woods was only about two miles long, and we were soon at the end of it, but we had to cross another wide field before reaching the next strip, which was longer and more dense. We were walking quickly, and talking

with the easy familiarity of beloved master and devoted servant of the early sixties, when, about the middle of this field one of the dogs uttered a sudden howl, and fell back terrified on his haunches. Quickly the others took it up and with one break they turned and fled in every direction. As they tore frantically by us, one running between Sam's legs and nearly tripping him up,—we became aware of a large white something directly in front of us,—a perfect ghost, down to the smallest detail,—tall, almost transparent, with arms out-stretched as if bearing down upon us, leaving us no possible chance of escape. Sam, with a strangled yell, doubled up to half his natural size, and holding the torch as far as possible from him, tore off across the field and was soon out of sight. I confess that as I was left alone to face that Thing my back fairly ached with the burden of life. I did not dare to turn for fear of being pursued, so began to back off as rapidly as my trembling knees would allow, keeping a weather eye on the enemy. When about six feet

(Continued on page 624)

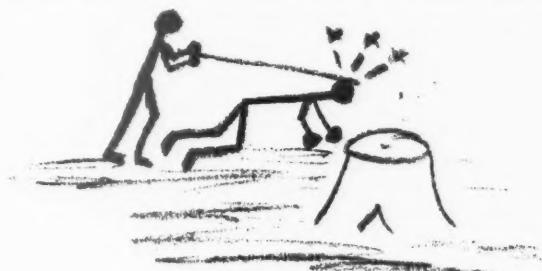


Knowledge is Power

A newcomer once asked Wes' Day, famous as a logger in the Lake States many years ago, for a job driving ox team.

"All right, I'll see what you know," said Wes' getting down on his hands and knees, and handing the man an ox goad. "Now I'm the nigh ox and that stump's the off ox and you want to make us go to the right."

"Who" said the driver touching Wes' lightly on the left side



with the goad and giving the stump a vicious prod. At this point Wes' started to turn to the left.

"Get the h——l over there you ——!" yelled the driver and brought the goad down with a crash over the face of the human ox.

He got the job.

Versatile

Itinerant Gardener (with large shears)—"Morning, mum—trim your grass, mum?"

"No, thank you."

"Clip your bushes, mum?"

"No."

"Bob your hair, mum?"—*Boston Transcript.*

Unreasonable Woman!

Our pride in our Forest camp grounds received quite a shock when a lady caller was perfectly surprised to learn that they were not provided with gas and electricity, had no bus line connection and no rural free delivery service.

—*Prescott Dolls.*

Foreign Phrases and Their Meaning

Summum bonum. He pulled some bone.

Tempus fugit. Tempting a fugitive.

Terra firma. He's the terror of the firm.

Sine die. Sign on the dotted line and die.

Sic volo, sic jubeo. Everybody's sick.

Ma chere. My chair.

Ma fois. Ladies first.

Locus standi. You have to stand on the local.

Robe de Chambre. Robbing a chamber.

In loco parentis. His parents have locomotor ataxia.

—*Life.*

Baths Delivered to Your Door

The California Highway Department extracted this from a recent field requisition:

"Please issue a purchase order for water to be used during the sprinkling season on the following parties:

Mr. M——, Iona, California.

Mr. H——, Pine Grove, California."

Pa Trolman Says:

"Cain't start fightin' fire yet—I ain't got no report blanks."

—*The Forest Patrolman.*

Maybe Not That Kind of a Fish

Maybe it's an inferiority complex that makes a fish pass up your gaudy tackle and accept a boy's bent pin.

—*San Francisco Chronicle.*

The Lookout Philosophizes

We had puffed laboriously up to the State Mountain Lookout on the Eldorado National Forest in California. The lookout man greeted us and continued to gaze through a pair of ancient binoculars.

"Hold these a minute," he snorted, "while I locate that smoke with the naked eye."

The Secretary of the Pine Association, one of our party, took the glasses and let out a yell as he saw himself approaching through them on the horizon.

"General Washington had 'em at Valley Forge" declared the lookout, "And Grant's initials are cut on the barrel. For God's sake, tell Supervisor Smith that."

"That's no fire," he continued, "have a drink of water. I'd give you something better only the last batch I made out of



figs, I put in the bath tub and it ate all the enamel off, so I threw it out.

"That's my barn down there. Keep a horse and a machine too. Got to the last fire in three minutes."

And as we registered in the visitor's book we wondered who had said that a lookout's life was monotonous.

"America's First Citizen" Passes

WITH the death of Charles William Eliot, President Emeritus of Harvard University and "America's first citizen," The American Forestry Association loses a distinguished Vice President.

Keenly interested in all subjects that had to do with human happiness and human welfare, Dr. Eliot followed closely the conservation movement in the United



CHARLES WILLIAM ELIOT
1834-1926

States. He was honorary president of the National Conservation Association, and from 1909 until 1922 and from 1925 until his death he served as a Vice President of The American Forestry Association.

In a life crowned with momentous achievement in many fields, Dr. Eliot gave generously of his time and energies toward furthering the conservation idea.

Conservation Week

September 27 to October 2 has been designated by the Sesqui-Centennial Commission as "Conservation Week" at the Sesqui-Centennial Exposition in Philadelphia. An interesting program has been arranged which will include meetings in the Pennsylvania Building to be addressed by Colonel W. B. Greeley of the Forest Service, George D. Pratt of The American Forestry Association and others.

New Hampshire Forestry Society's Twenty-fifth Anniversary

THE twenty-fifth annual meeting of the Society for the Protection of New Hampshire Forests, held at Lost River, New Hampshire, September 1-3, was the occasion of a forestry gathering which should go down in the history of New England forestry. It fittingly called to public attention the constructive accomplishments of the Society during the past quarter of a century under its able Forester, Philip W. Ayres; it brought together conservationists of state and national note, who crystalized the important forestry work yet to be accomplished and it marked the announcement of a gift of \$100,000 to the Society to be used in furthering the work of the organization in preserving out-standing scenic regions of New Hampshire. The gift was from the late James J. Storrow, formerly treasurer of the Society.

The meeting was held on the Society's reservation "Lost River," a tract of 734 acres which was acquired a number of years ago and which under the Society's plan of non-profit development has become one of the most famous natural spots in the state. The area embraces the remarkable Lost River Caverns, which during the past summer have been visited by 40,000 people.

Apart from the regular sessions of the meeting devoted to addresses and discussions, many interesting and instructive field trips were provided those in attendance. These included a tour through the caverns, inspections of plantings and thinnings on the reservations, numerous hiking trips over river and mountain trails and a visit to the timber farm of O. M. Pratt, at Holderness, where pruning of white pine has been practiced for more than 20 years.

The first indoor session of the meeting was devoted to a discussion of the subject of introducing systematic forestry instruction in the boys' and girls' summer camps in New England. This was led by Mrs. E. L. Gulick, of Camp Aloha and brought out the growing interest of camp directors in forestry work and their desire for proper forestry material for camp instruction.

A feature of the evening session on September 1 was the address of Mr. George D. Pratt, President of The American Forestry Association, who discussed the legislative situation in forestry from a national point of view and called attention to the larger legislative problems which the American people must solve without delay. His address is printed on page 603 of this issue. At the same session, Mr. Arthur A. Shurtleff, Landscape Architect of Boston, who has directed the landscape work at Lost River, discussed the plans of development and Mr. Karl W. Woodward, of the University of New Hampshire, and Mr. John M. Briscoe, of the University of Maine,

discussed "The Next Step in Forestry." Both speakers stressed forest taxation as the most important problem to be solved if private forestry is to reach its full possibilities.

Among the subjects presented on September 2 were "National Parks and National Forests," by Major Barrington Moore, Secretary of the National Committee on Parks, Forests, and Wild Life; "Some Recent Observations in European Forests," by Mr. E. C. Hirst, formerly State Forester of New Hampshire; "Forestry From a Woman's Point of View," Mrs. W. W. Milar, Chairman of the Conservation Committee of the General Federation of Women's Clubs, "Boys Clubs and Forestry," by Mr. C. H. Wadleigh, Club Leader at the University of New Hampshire, and "Important Steps to be Accomplished in New

England Forestry," by Mr. John H. Foster, State Forester of New Hampshire. F. Schuyler Mathews, the naturalist, gave several field talks on the trees and plants growing on the Lost River reservation.

At the final session of the meeting Mr. Allen Hollis was reelected President of the Society and Mr. E. C. Hirst was reelected Secretary and James J. Storrow, Jr., Treasurer, to succeed his father. The meeting unanimously went on record, urging the immediate passage of the McNary-Woodruff bill, the adjustment of forest taxation and larger appropriations by the States and Federal Government for forest fire protection. A resolution was also passed opposing the exploitation of State lands in New Hampshire for recreation on a commercial or monopolistic basis.



Combat's End

THIS photograph shows the tragic end of what must have been a furious combat between two splendid deer whose horns became so interlocked by the impact of a terrific charge that it was impossible for the animals to release themselves. This unseen fight occurred in the woods of the Palisades Interstate Park, New York, which abounds with wild deer. The photograph was sent us by Major William A. Welch, manager of the Park, who, this winter with other members of his force, came across the animals a few days after the battle.

In their struggles, writes Major Welch, the animals, with horns locked, must have rolled down a side hill through the laurel brush and rocks for about fifty feet to where they were found.

"The one on the left, with its mouth open had its neck broken and its body had been almost entirely con-

sumed by the foxes. The other buck had been dead only three or four days when we found him. Whether he died from lack of water or was killed by foxes eating into him, we do not know. It is probable, however, that he survived the one with the broken neck from five to six days, judging from the condition of the flesh and skin.

"We were compelled to cut the necks off from the shoulders, for the skins were so badly torn that we could not save them. After skinning the heads, we attempted to unlock the horns, but the impact with which they had been locked was so great that we could not release them. The heads are now being mounted with horns locked, and they will be placed on exhibition in the Inn, and later sent to one of the large museums."

"Who's Who" Among Our Officers

BORN on a farm in southeastern Idaho, William M. Jardine spent the first 17 years of his life riding and ranching, breaking horses and, as the oldest son, carrying on the many tasks incident to western farming. His father had crossed the plains by ox-team in 1864 and, marrying a few years later, settled on a homestead for 45 years.

In 1904 William Jardine graduated from the Utah

Agricultural College, after which he became manager of the Utah Arid Farming Company which operated a vast dry farming tract at Nephi, Utah.

During 1905 and 1906 he was a member of the staff in agronomy at the Utah Agricultural College experiment station. He has been part owner and director and manager of farming operations since the year he finished school.



WILLIAM M. JARDINE
Secretary of Agriculture and Vice-President of The American Forestry Association.

Early in 1907 he became assistant cerealist in charge of dry land cereal investigations for the United States Department of Agriculture. In this capacity, February, 1907, to July, 1910, he had much to do with the direction and organization of stations throughout the west. He represented the federal government for co-operation with Oregon officials in locating and planning the work of the station at Moro, Oregon.

In July, 1910, Dr. Jardine became agronomist for the Kansas Agricultural College and experiment station. His success as a teacher, investigator and organizer led to his appointment as dean of agriculture and director of the experiment station in 1913, and continued

success resulted in his appointment as president of the institution in 1918.

For years he was active in the International Dry Farming Congress and Soil Products exposition and was its president in 1915-16; president of American Society of Agronomy, 1916-17; member of executive board, National Research Council; member of advisory council, agricultural committee of American Bankers' Association; fellow in American Association for Advancement of Science.

In 1925, he became Secretary of Agriculture and a Vice-President of The American Forestry Association.

With such a background it is natural that Secretary Jardine should have a keen sympathy for the problems of the farmer as well as an appreciation of the forestry problems of the country. Sound thinking and vigorous ideals have made him an outstanding figure in affairs of international scope. Dr. Jardine has a first-hand knowledge of agriculture in every western state and knows the range problems as well as problems of the irrigation farmer. During the war he was chairman of the Agricultural Production Committee of Kansas State Council of Defense and functioned in an advisory capacity for many other activities.

"The 'Possum Hunt"

(Continued from page 620)

from the horrible apparition a panic seized me; and, no longer able to control the forces in and around me, I wheeled, but with such velocity that I again found myself face to face with the ghost. Only pride kept me from emitting a yell the equal of Sam's but I dropped my gun and fled.

It pains me to go into details, but I am willing to wager that no two miles of rocky ground were ever accomplished with more speed and less ambition than on that memorable night!

Next morning, or rather after a few hours' sleep, for it was morning when I set out for my "fine sport,"—I determined to find out what it was that put such a sudden end to our fun, so, instead of calling Sam to accompany me (I preferred to recover my gun without even a sympathetic witness), I strolled leisurely away from the house until out of sight, then quickened my steps, finally reaching the scene of our adventure.

As I stood looking with amazement and relief, a loud laugh at my elbow betrayed Sam, bending over and slapping his knees in great glee. Seeing my surprise at being discovered, he fell flat on the ground and rolled over and over in speechless delight.

For the wonderful ghost stood revealed—not as a dread apparition of the night, but as a modest wild cherry tree, completely enveloped in a cobweb, covered with heavy frost!



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THE AMERICAN FORESTRY ASSOCIATION



Kentucky Frames New Forest Tax And Fire Laws

A new Kentucky law provides that privately owned timber tracts may be listed as state forest and game preserves, with a fixed maximum valuation for taxation purposes of \$2.50 an acre and with a 10 per cent commodity or yield tax to be paid at the time of timber cutting. The State Forestry Department is to direct the management of property so listed, the owner working with the department in carrying out its plan. If the owner infringes on the plan of management, he can be charged the difference between taxes at the old and at the new valuation for the whole period during which his land has been under management as a forest and game preserve. The yearly taxes will go into the State forestry fund, and the yield tax will be divided equally between the State and the county. Senator Bond, the author of the bill, hopes that these game preserves will meet the State's needs so far as State forests are concerned. The Senator himself is turning over 20,000 acres of land to State control under these provisions.

The Kentucky Legislature has also recently enacted a law authorizing forest wardens to summon fire fighters and equipment, to trespass on private land in line of duty, and to make arrests without warrants for violation of forestry laws. It provides moreover that wardens may administer oaths to witnesses in investigations of fire causes and to persons claiming compensation, and that persons summoned to fight fire need not be paid.

Lumber for Our Navy

The Navy notwithstanding that this is decidedly the age of steel in naval arma-

ments, uses an enormous amount of lumber—so great in fact that it constantly has \$5,000,000 worth of lumber stock on hand.

Rome, Georgia, to Have Municipal Forest

Through the efforts of Miss E. F. Andrews, who for years has been interested in the municipal forest idea, the Seven Hills Garden Club of Rome, Georgia, has undertaken to raise funds and establish a municipal forest near the city. Miss Andrews is a well known botanist and a tireless worker for conservation. She writes concerning the Municipal Forest project:

"As I was first awakened to the importance of this subject by reading the publications of The American Forestry Association, especially the Magazine, I am writing to express my thanks for the education in forestry thus obtained, and the hope that others may be benefited in the same way."

Mexico Passes New Forestry Law

Acting under authority granted by the Federal Congress of Mexico, President Calles has recently promulgated a forest law which will be administered by the Forest Service under the Department of Agriculture. It provides that all unappropriated forest land and all forest land acquired by the Federal Government or the States shall be declared a forest reserve, and shall not be subject to alienation. The Executive, through the Department of Agriculture, may permit exploitation under working plans that will insure continuous forest production.

No private forest land may be deforested or exploited without a permit from the Department of Agriculture, which shall require the reestablishment of forest vege-

tation destroyed by natural or artificial means. The Federal Government may take over land on which reforestation is deemed necessary for fixation of sand dunes, control of torrents, etc., in case the owners refuse to do the work. The Department of Agriculture is to establish forest nurseries itself or in cooperation with local authorities.

A splendid clause in the law states that no railroad ties, posts, poles, or mine props may be used without having been treated with some preservative. It is also required that all commercial timber be sawed not hewn. Any industry using wood must use it completely, including by-products and waste.

The college of forestry for training technical officers is under control of the Department of Agriculture, and the Federal Government is to cooperate with local governments in establishing secondary schools for training the subordinate personnel.

Forest industries are to be taxed according to the quantity and value of output. Owners managing their forests according to an approved working plan are to pay no tax on the forest cover until it is cut, can call upon the Forest Service for technical help in making the working plan and for assistance in reforestation, and in case of artificial reforestation are exempted from Federal taxes on the land itself.

Mississippi's First State Forester

Roy L. Hogue has been appointed by the recently organized Mississippi Forestry Commission to the office of State Forester. Mr. Hogue, who is a graduate of the University of Michigan Forest School, has been active in lumbering and forestry in Mississippi for many years.

California Sportsmen Assume Responsibility

Realizing the necessity for meeting extremely serious forest conditions which have made advisable the closure of most of the California National Forests during the drier portions of the fall the associated sportsmen's clubs of California undertook to finance an additional number of patrolmen through public subscription. The plan proposed the raising of a fund of \$10,000 through broadcasting an appeal to hunters and lovers of the California Mountains. It would further plan to register all persons entering the National Forests.

The Forest Service approves of the movement and points out that it is the first time that the public has been asked to say whether or not forest areas should be closed during the hunting season.

At the time of going to press it is not known whether the campaign was a success but those in charge felt that the graveness of the fire situation on the one hand and the threatened curtailment of hunting privileges and the business of sporting goods houses on the other, would result in raising the entire fund.

Texas Erects First Fire Tower

The first steel lookout tower in Texas for discovering forest fires was recently erected on the Kirbyville State Forest by the Division of Forest Protection of the Texas Forestry Department in cooperation with the U. S. Forest Service. The tower is eighty feet high and commands a view of territory from twenty-five to thirty miles distant.

Novel Duck Hunting in Mexico

The Jack-o-Lantern of the north catches ducks in the south. William F. Merrill, speaking before the Skowhegan Rotary Club of Maine recently is authority for the following story:

During the winter months, millions of canvas-back ducks and other varieties swarm into the Mexican lakes, ponds and streams. The peons, mostly all too poor to afford guns and ammunition, satisfy their need for succulent duck in a novel manner.

Throwing out pieces of pumpkin to float about, the ducks become accustomed to the floating food which they greedily eat. The ingenious native takes a pumpkin of suitable size, cuts out a hole in the bottom to admit his head, clears out the interior, cuts two eye holes and picks out the nearest flock. Going down into the water he wades about with the pumpkin on his head, but low enough so that it has the appearance of floating on the surface. By cautious movements he can walk up to the unsuspecting ducks, grab them by the legs and pull them under. This he continues until he has all his bag will carry.



GET it this Fall... a mighty spread from the northwoods of Canada, where moose are plentiful and skillful guides are ready to take you to their favorite haunts.

Write to A. O. Seymour, General Tourist Agent, Canadian Pacific Railway, 6110 Windsor Station, Montreal, Canada. He knows the moose country and will see that you are given full and reliable information.

Canadian Pacific

Forest Service Steel Towers

This illustration shows a galvanized steel tower erected by the U. S. Forest Service on Promontory Butte, Sitgreaves National Forest, Arizona.

The tower, which is 110 feet high to the floor of the house, was designed and made by Aermotor Co., Chicago.

The well guarded stairs and the frequent landings make this high tower safe and easy for any one to climb.

The Aermotor Co. makes the best types of towers for forest protection and other purposes.

Write for their new Bulletin on Forest Service Towers

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Photo. by R. E. Marsh. Courtesy U. S. Forest Service



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We own and operate the largest and only modern Beaver farm in the world. We have been raising beaver for the past three years and are the first to pen-breed and pen-raise beaver. We also raise them in a semi-wild state.

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Write for our sales plans and prices

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Ohio Sportsmen Prove Good Foresters

Forty-five thousand forest tree seedlings were planted this year on Ohio farms and in municipal parks by twenty-six chapters of the Isaac Walton League. This work was done in accord with a plan outlined by Edmund Secrest, State Forester.

Each chapter is asked to cooperate with farmers by planting at least one acre a year. The state furnishes the trees, the league members do the planting, the farmer agreeing to protect his young trees.

The league will thus not only aid in the conservation of game by establishing coverts, but it will also aid the farmer in the reclamation of his waste land. The farmer has sometimes suffered from the depredations of careless sportsmen, and it is hoped that this plan will lead to a better understanding and cooperation.

The league is a national organization largely of professional and business men who are sportsmen and outdoor enthusiasts as well. This year 26 of the 126 Ohio chapters planted forest trees. The New Philadelphia chapter planted 3½ acres at Schoenbrunn Park the site of the first white settlement in Ohio. The Springfield chapter planted fourteen acres of the new municipal forest which is sponsored by that chapter.

Ten Candles On The Birthday Cake

The National Park Service of the Department of the Interior recently celebrated its tenth anniversary.

Prior to 1916, the administration of the national parks and national monuments was delegated by the Secretary of the Interior to one of the subdivisions of his office. In that year there were 14 national parks and 18 national monuments. At present there are 19 national parks and 32 national monuments, with 4 other parks awaiting their authorization.

At the close of the 1916 travel year, a total of 356,097 visitors had visited the parks and monuments. This was considered a large number but when contrasted with the estimate of 2,300,000 for this year it will be seen that their popularity has grown tremendously.

Every convenience and comfort possible has been developed and made available for the many tourists. Hotels, camps and transportation, modern sanitation, roads and trails, are among the many additions that have been added to the national parks and monuments by the National Park Service. Special attention has been given in the past few years to the development of the educational opportunities in the parks, by the establishment of museums and a nature guide service. The use made of these educational facilities indicates that their extension will be one of the most valuable developments in National Park history.



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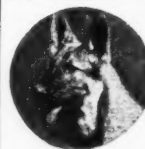
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This Filson Cruising coat in beautiful soft warm colors will keep you warm and dry. Red and black plaid, green and black plaid, gray and black plaid. Order one inch larger than white collar measure.

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to train. I have the game and I am well experienced in the business. I also have some nice bird dogs for sale that do the field work and if you want rabbit hounds I've got the goods—the kind that runs a rabbit until he's killed. These dogs were raised here in the country and can stand the work. I will send one to you on trial and you can judge for yourself.

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New Game Law Bulletin Issued

The hunter is again required to stop and read. A new bulletin, "Game Laws for the Season 1926-27" has just been issued by the United States Department of Agriculture. It has been compiled by Talbott Denmead and Frank L. Farnshaw of the Biological Survey and is published as Farmer's Bulletin No. 1505-F. The outstanding information presented is the summary of laws relating to seasons, licenses, limits, possession, interstate transportation, and sale, for each State and Province, in the form of detailed but concise synopses.

The game-law bulletin is now being distributed to law-enforcement officials, conservationists, sportsmen, and others as an aid in the administration by the Biological Survey of laws protecting migratory birds and regulating interstate commerce in game. Copies of the bulletin can be had on application to the United States Department of Agriculture, Washington, D. C. State game laws may be obtained from the respective State game and conservation officials, a list of whom is given in the new bulletin.

Try This On Your Toxicodendron

Susceptible hunters and others are now assured of complete protection from poison oak. According to Dr. Frank Thone, in *Science Service*, it is only recently that any improvement has been made in the situation as summarized by Capt. John Smith in 1609; "The poisonous weed, being in shape but little different from our English yvie; but being touched causeth redness, itching, and lastly blisters, the which, however, after a while they passe away."

It is no longer necessary to itch and wait. Dr. J. B. McNair, of the University of Chicago, has isolated the poisonous element and finds that ferric chlorid neutralizes it completely. A 5 per cent solution of ferric chlorid and half-and-half mixture of alcohol and water, or glycerin and water used to bathe the hands and face before or just after exposure to poison oak prevents any ill effects. The solution is harmless.

Another cure is recommended by J. F. Couch, U. S. Department of Agriculture. He finds that painting patches of poisoned skin with a solution of potassium permanganate gives immediate relief. The resulting brown color may be removed with a weak solution of oxalic acid.

Wisconsin Plans Reforestation Project

Plans are being made for a huge reforestation project in Rusk County, Wisconsin. The conservation committee of that county, located at Ladysmith, is considering the possibility of reclaiming 540,000 acres of the county's total acreage of 559,040, by growing forests on the land unavailable for agricultural use.

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If you shoot a "Repeater" or "Automatic" your worries are over for Press-Ur-Shell vests protect the shells from snow or rain and keep the "Crimp" in "Perfect" shape. It takes the weight off your shooting arm, eliminating bulky side shell pockets to be lifted each time you raise your gun.

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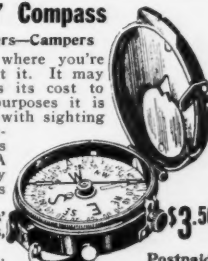
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For Hunters—Travelers—Campers

Day or night—know where you're going—don't guess at it. It may be worth many times its cost to you. For scientific purposes it is a perfect instrument, with sighting arrangement and floating dial, which locks when case is closed. A wonderful opportunity to buy a \$15 compass for \$3.50.

Also U. S. Engineers' Prismatic Compass, \$7.50 postpaid.



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FIALA 22-cal. Combination Rifle and Pistol; high-grade; 3 barrels; a \$30 rifle for \$18

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because of their low feed and labor cost compared with their pelt value.

I still have 35 pair best quality registered 1926 pups for sale. They must please you.

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High Quality Silver Black Foxes

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Literature and propositions free on request

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FENCING, FOOD, PENS for FOXES

Write the Service Department of American Forests and Forest Life, for names of manufacturers of supplies for fox kennels and for general information about the fox industry.

Rolling The Hoop Snake Myth Into The Discard

Superstitious fear of snakes has led to persistent belief in various baseless myths about the habits of different species.

The "hoop snake" and "stinging snake" traditions are among these. The hoop snake is credited with the power to form itself into a hoop and roll in pursuit of its victim with racehorse speed. If the victim dodges and a tree is struck by the hoop snake, the tree is said to be sure to die. That any snake could place its tail in its mouth and roll along is manifestly absurd and anatomically impossible.

Likewise the stinging snake myth is absolutely unfounded. Although this particular snake's tail has the shape of a horn or spike, it is quite incapable of piercing or stinging anything.

The so-called glass or jointed snake—in reality a legless lizard, has the power of dropping its tail and escaping from a pursuer. Because of this ability the story arose that when struck, this creature will break into pieces and may reassemble itself later if its head has not been captured or destroyed.

In the same category may be placed the myth of the milk snake. Anyone familiar with milking knows that the pressure required to obtain a flow of milk is far greater than any snake could exert. Furthermore, a snake has two rows of recurved teeth in each jaw, which would make sucking impossible.

Hoo-Hoo Issues A Forestry Booklet

Its cover a striking picture in colors of the Red Demon of the Forest with the wild folk in mad escape before it, the new forestry booklet issued by Hoo-Hoo is just off the presses and available to all friends of the forest.

The attractive booklet of twelve pages presents vital forest facts in a striking manner. It is generously illustrated with appropriate photographs and brings home to every reader the urgent need for protection of our beautiful and valuable trees—that cannot speak in their own behalf.

H. R. Isherwood, Secretary-Treasurer of the Concatenated Order of Hoo-Hoo, Arcade Building, St. Louis, Missouri, will be glad to send your copy to you.

Two New State Parks

Gifts totaling 310 acres of land lying on the north side of Moran State Park on Orcas Island in Washington were recently announced by J. Grant Hinkle, Secretary of the Washington State Park Board at Olympia.

Iowa has added a new State Park with the dedication of Pine Creek Park at Eldora early in September. This park contains a lake covering about 30 acres surrounded by beautiful woods.

Minnesota Votes on Tax Amendment

At the general election in November the people of Minnesota have an opportunity to take a forward step toward practical forestry when they vote on an amendment to the state constitution which would exempt from taxation all woodlands until they shall come into the market through the cutting of timber suitable for commercial purposes.

If this amendment is passed, thousands of acres of cut-over and idle land can be put under forest growth.

Under the state constitution an amendment must have a majority of all votes cast at any general election in order to become effective. Two years ago the amendment was lost because the voters of the state neglected to vote on the issue in sufficient numbers, although most of the votes were favorable. Many associations are now working hard to bring out the vote for the adoption of this important measure.

Women's Clubs to Save Tract of Virgin Douglas Fir

Believing that some of the great Douglas fir trees in the State of Washington should be preserved as an example of virgin timber, the State Federation of Women's Clubs has undertaken to purchase an area containing a large number of specimens which measure from six to nine feet in diameter and grow to a height of 250 feet. The tract is located on both sides of the Sunset Highway over which more than 2,000 cars pass every day. Under the leadership of Mrs. Thomas Greenlees, Chairman of the Division of Conservation of the State Federation, a campaign is under way to raise the money by selling individual trees at \$100 and buttons at \$1.00 each.

Taxation Law Discussed by North Carolina Forestry Association

The annual meeting of the North Carolina Forestry Association held at Morehead City, North Carolina, September 2nd and 3rd, resulted in the reelection of Colonel Joseph Hyde Pratt, of Chapel Hill, President, and W. J. Damtoft, of Canton, Secretary-Treasurer.

The meeting was marked by discussion of proposed necessary tax legislation which would make the reforestation of idle land more attractive to citizens of North Carolina. Resolutions were adopted favoring the appropriation by Congress of \$2,000,000 for the coming fiscal year to be used in the acquisition of National Forests, and commending The American Forestry Association for its projected educational campaign. Other resolutions covered commendation of the work of the Appalachian Forest Research Council and of Joseph Hyde Pratt, who has labored for twenty-five years in the interests of conservation in North Carolina.

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In addition to the pleasure and profit derived from raising Silver Black Foxes, an added attraction can be had by using part of the ranch for the growing of beautiful trees and shrubs.

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What does "Quality Foxes" mean to you? If it means quality in fur production, quality in reproduction, quality in prolificacy—then you want Wausau Foxes with an enviable national show record. 75% of 70 foxes shown are winners.

Write us for further information
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QUALITY first, last and always, backed by rigid culling and scientific breeding, with results that five out of six national showings HERCULES SILVERS won the Alaskan Sweepstakes, pup and numerous other ribbons.

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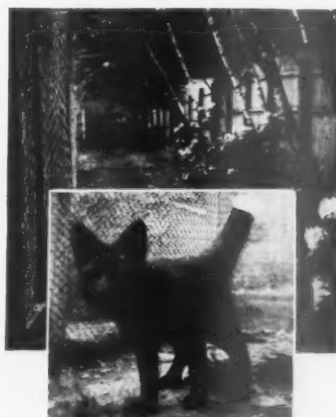
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Courtesy, Samuel F. Wadsworth, M. D. U.

Trees and Foxes

FOX BREEDING at the present time has developed far beyond the ideas of the pioneers in the industry. Ranches are constructed differently, foxes are fed and handled differently and much more attention is now paid to the attractiveness of the ranch and the general layout is planned for beauty, as well as safety and convenience.

The unusual profits in this branch of farming make it interesting in every way. This is equally true of the little "chicken yard" ranch or of the very large commercial undertaking.

Some fox breeders prefer a ranch location in a natural wood, while others like the ranch in an open field, where the shade trees can be placed to the best advantage as regards usefulness and beauty. There is no doubt that foxes do much better where there is both an abundance of shade as well as of sunshine.

There is no more beautiful sight than that of a number of fine silver black foxes in the fall of the year, running and playing in a well kept ranch and they seem to know and appreciate fine, clean, well-shaded pens.

Beautifying the fox ranch is not an expensive undertaking for so many trees and shrubs can be found on, or near, the ranch location and they can be transplanted with little labor; in fact, probably no other animal that is raised on the farm can be quartered as cheaply as can foxes.

Any waste land if dry and well drained is suitable. It is not necessary to build expensive buildings, as it is not necessary to provide warmth; as foxes like the coldest weather. All they need is a snug, dry shelter, free from draughts and dampness and even then they may prefer to dig their own dens and start housekeeping in the natural way. Of course foxes require the best of care, attention and food, but this does not mean that the expense of such food and care need be great.

A few foxes can easily be kept on the left-overs, providing all food is sweet and clean and some variety be given. Foxes are fond of nearly all kinds of fruits. Grape vines, apple trees, cherry trees and plum trees can be easily raised in the fox ranch. Any person who is fond of animals and a lover of the great outdoors will certainly enjoy fox breeding. It is profitable.

To succeed associate yourself with the Silver Fox Breeders' Bureau. Let us send you a Government Bulletin on Fox raising. Let us advise you as to starting in this fascinating game.

Just address: Manager, SILVER FOX BREEDERS' BUREAU, Room 401, 155 East 42d Street, New York City, N. Y.

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Know Your Fox by selecting the highest quality scientifically bred foundation stock.

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A vigorous prolific strain line bred for many generations on our Island on Lake Ontario without infusion of outside blood. Winning a prize or place with every fox shown.

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Borestone Foxes have produced 4 grand Show Champions, many sweepstakes and Blue Ribbon Winners. Over 100 Prize Winners.

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Davey Tree Surgeons have back of them the whole life of Tree Surgery, founded by John Davey, plus 25 years organization experience.

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Davey methods are standardized. They are proved by vast experience—a half million trees saved by Davey Tree Surgeons in 25 years. No experimenting is done on your trees.

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Kotok, Director California Forest Experiment Station

Edward I. Kotok, for 15 years an officer of the California District of the United States Forest Service has been appointed Director of the new Forest Experiment Station to be established in this State.

Director Kotok brings to his new position a wealth of practical experience in the important phases of fire control and forestry research. Starting work in California as a Forest Assistant on the Shasta National Forest in 1911, he steadily advanced to the supervisorship of the Eldorado National Forest, and in 1919 was assigned to the important work of fire inspection for all National Forests of the State. He also has had charge of planting work in northern California, inspector of State work, and is the author of many government publications dealing with the problems of fire and forestry practice.

The other members of the California Forest Experiment Station staff already selected are: Duncan Dunning, silviculturist of the District headquarters at San Francisco; A. E. Wieslander, Technical Assistant from the Lassen, and H. A. Siggins, Junior Forester. Two additional assistants will be appointed at an early date.

Bulletin Issued On White-Pine Weevil

A bulletin which will be of interest to owners of white pine timber plantations is "Biology and Control of the White-Pine Weevil," by Samuel A. Graham. This has recently been published by the Cornell University Agricultural Experiment Station of Ithaca, New York.

The history and habits of the pest are fully described and methods of controlling its spread and infestations are outlined. Experience, it states, has shown that pruning the infested shoots gives the best results in reducing its spread. It has been found, also, that dense planting of pines insures a very small percentage of loss from the ravages of the weevil since the insect is fond of the sun.

New Forestry Magazine Published in French

La Foret et La Ferme an illustrated monthly magazine, written in French, came into existence with the July issue. It is published by the L'Association Forestière of Canada, at Gardenvale, Quebec, and its Editor-in-Chief is M. Avila Bédard, Director of L'Ecole d'Arpentage et de Génie Forestier, at Quebec. The magazine covers a great variety of subjects, among which are tree planting, game protection, forest fires, and forest products. It will be of interest to the French reading public of Canada, especially the farmlot and timberland owners. The subscription charge is \$1.00 a year.

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SERVICE DEPARTMENT

The American Forestry Association,
1523 L Street, N. W.
Washington, D. C.

Annual Meeting of The American Forestry Association

The annual meeting of The American Forestry Association will be held during January, next, in Connecticut. It will be a joint gathering with the Connecticut Forestry Association, and will be held either at Hartford or New Haven, Connecticut. The date has not yet been fixed, but it, together with other details of the meeting, will be announced later. Both associations have issued a joint invitation to the Canadian Forestry Association to participate.

The Nominating Committee, appointed by the Board of Directors of The American Forestry Association at its last meeting to prepare a list of officers to be balloted upon by the membership at the coming election, is now busy preparing its slate. The committee is composed of Mr. Augustus S. Houghton, of New York, David T. Mason, of Portland, Oregon, and Edmund Secrest, State Forester of Ohio. The following officers are to be balloted upon in the referendum to be held during December: President, twenty-one Vice-Presidents, Treasurer, Assistant Treasurer and three Directors. All officers elected are to serve for terms of one year, with the exception of the three Directors, whose terms of office will be for five years. The Directors whose terms expire at the close of 1925 are Colonel W. B. Greeley, J. E. Aldred and Dr. John C. Merriam.

The Committee on Nominations will be glad to have suggestions from the membership for any officer of the Association to be elected. According to the by-laws of the Association, separate nominations may be made by not less than twenty-five members of the Association, provided these nominations are signed by the members submitting them and are received by the Committee on Nominations on or before November 1. All suggestions and nominations should be addressed to the Committee on Elections, The American Forestry Association, 1523 L Street, Washington, D. C.

State Foresters to Meet in Baltimore

The Association of State Foresters will hold its annual meeting during the week of October 11 in Baltimore at the headquarters of its President, F. W. Besley, State Forester of Maryland. Monday, October 11, will be given over to a business session, while the three following days will be spent with the Maryland Forestry officials in field trips. On the 15th a meeting will be held at Washington in conference with the officials of the Forest Service on cooperative matters under the Clarke-McNary Law. The 16th will be given over to informal conferences with the officials of the Forest Service, The American Forestry Association and other organizations in Washington.

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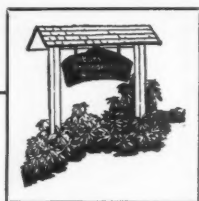
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League Proposed For War On Plant Disease

The banding together of the civilized nations of the earth to fight diseases of plants as they now unite to fight human plagues was advocated by two of the foreign delegates at the International Congress of Plant Sciences, Professor E. van Slogteren, of Lisse, Holland, and Dr. E. Foex, of Paris.

Each of the two scientists pointed out that the control of the diseases that wreck our crops is an international affair, and that a plant epidemic appearing in one country may quickly become a very serious problem in a neighboring state, or in a country to which exports are made. International quarantine barriers are recognized as difficult of enforcement and frequently the cause of international irritation; and they may at any time be nullified by the carriage of the germs of the disease by birds or insects. Nevertheless it is also recognized that they may at times be desirable or at least unavoidable, and methods should be worked out for their most effective and least burdensome application.

More effective, Dr. van Slogteren suggested, would be international organization for the fighting of the plagues at home, so as to stop undesirable immigrants at the source or even to wipe them out completely.

Dr. Foex proposed that a call be issued for an international conference on plant diseases and pests, to be held during the current year. This conference would be called upon to take up the work partially completed by earlier conferences which met on the same subject, but those programs were seriously interfered with by the war. —*Science News Letter*.

Treated Pine Posts Resist Decay

A report has just been received on the annual examination of two ranger station pasture fences on the Leadville National Forest in Colorado. The fences were built in the fall of 1908 using fire-killed lodgepole pine posts which had been treated at the old treating plant located at Norris. At the Soda Creek station four posts out of ninety-nine set originally have decayed. These posts were set in wet ground. The average diameter of the posts at the surface of the ground is eight inches and apparently the posts which decayed were the smallest ones in the fence.

At the Dickey ranger station twenty posts out of a total of 534 set originally have decayed to date. These posts were in dry black loam soil and also slightly smaller than the average posts in the fence. Ranchmen in that vicinity state that five years is the average life of an untreated lodgepole pine post.

Foresters Meet in Green Mountains

Over one hundred foresters gathered at Bread Loaf Inn on the eastern slope of the Green Mountains of Vermont, August 22-26 for the summer meeting of the New England and New York Sections of the Society of American Foresters. The meeting was declared to be the most successful ever held by the sections. All sessions with the exception of those held in the evenings, were devoted to field trips. These trips were so arranged that those in attendance were able to obtain a broad knowledge of forest conditions throughout the Green Mountains and of the work of the Vermont State Forestry Department under State Forester Ross.

Bread Loaf Inn is located in Battell Forest, a tract of 30,000 heavily wooded acres, owned by Middlebury College. It is being operated on a sustained yield plan of management under J. J. Fritz as forester. Inspections were made of the cutting operations on this forest and the cutting methods studied and discussed by the visiting foresters. Readers of AMERICAN FORESTS AND FOREST LIFE will recall that Battell Forest and its plan of management were fully described in the November, 1925, issue by Col. Theo. S. Woolsey. Inspection trips were also made to a number of saw-mills and woodworking plants surrounding the forest and to the State Nursery near Essex Junction, where 3,000,000 transplants will be available for shipment next spring.

Among the numerous forest plantations visited by the foresters were those on the Billings Estate at Woodstock. This estate embraces a tract of 900 acres and is the best managed forest area in Vermont. It also contains probably the oldest plantations in New England, some of the plantings dating back to 1880. Here the foresters were shown a Norway Spruce plantation over 45 years old and somewhat younger plantations of white pine, Scotch pine, red pine, Austrian pine, European larch, ash and maple. The visit to this estate, made possible through the courtesy of Miss Elizabeth Billings, who is keenly interested in having the best forms of forestry practice applied to her woodland, was one of the outstanding features of the meeting.

At an evening session on August 25, the foresters passed a strong resolution urging upon the Federal Government and the State Governments of New England the need of larger appropriations for forest fire protection. The meeting also went on record in favor of increasing the membership dues of the Society in order to strengthen its activities and passed a resolution urging the Executive Council to hold another referendum on the proposal.

Markets For Short-Length Lumber Surveyed In New Publication

An illustrated circular just issued by the Forest Service, United States Department of Agriculture, entitled "Industrial Outlets for Short-Length Softwood Yard Lumber," will be of interest to the lumber trade. According to it refrigerators, ice-cream cabinets, automobile export boxes, sectional and ready-cut buildings, coffins, caskets, garage door panels, washing machines, beehives, toys, agricultural implements, cable reels, and commercial fixtures are some of the leading commodities whose manufacture offers broad outlets for short-length lumber.

This new publication, Department Circular 393-C stresses particularly the inability of the building trades to absorb the available quantity of short-length lumber. According to its author, the booklet has been written in response to the demand of the lumber trade for information regarding the disposal of this material. In setting forth the facts obtained by the Forest Products Laboratory at Madison, Wisconsin, in a recent survey of the situation, the author points clearly to the obligation of the lumber industry to take definite steps toward improving the marketing of short lengths.

Minor outlets for short lengths include ironing boards, stove boards, battery boxes, drawing boards, shovel boxes, toilet tanks, cloth boards, core stock, and windmill vanes. Established outlets well worth cultivating are said to be box shooks and crating, including shorts for blocking, bracing and skids for shipping machinery.

The booklet can be obtained free as long as the supply lasts from the United States Department of Agriculture, Washington, D. C., and from the Forest Products Laboratory, Madison, Wisconsin. It may also be secured by purchase from the Superintendent of Public Documents, Washington, D. C.

New York Plans New Association

An effort will be made to organize a permanent state-wide association of small timberland owners and operators for the purpose of obtaining better prices for the products of the small woodlot at the second annual small sawmill demonstration to be held at the New York State College of Forestry, Syracuse University, October 14 and 15. How to obtain the maximum amount of quality lumber from the different types of logs and how to care for and dispose of such lumber will be an important phase of the joint conference and demonstration. The small woodlot and the portable sawmill are becoming more important in the forestry and lumber program of the East. Like other eastern states, New York is seeing the last of her big commercial forests and large sawmills. They have been replaced for the most part by the small farm woodlot and portable sawmills.

The greatest problem of the small timberland owner is to know how to turn his mature timber into the greatest profit. The manufacture of lumber is the course generally pursued but in a large percentage of cases the lumber actually represents a loss and not a profit. The small timberland owner usually lets his sawing job to a contracting mill man at a certain price per thousand. The small mill man in most cases does not know the proper way to saw logs nor how to manufacture lumber, and if he does his interest is not in quality but in quantity production. In either case the timberland owner stands the loss. There is a great need for a movement on the part of the small timberland owner and operator, which will in some way help him to make a profit from his timber.

Maryland Boys And Girls Are Forest-Minded

The boys and girls of the 4-H clubs of Harford County, Maryland, have purchased a tract of 180 acres for a permanent camp site. Practically all this land is in second growth timber. But with the exception of the swimming pool, mess hall, living quarters and 8 acres in cultivation, the land is being handled as a forest on a sustained yield basis. A plan of management for the tract has been developed and all work is proceeding on a scientific but practical basis. The land not in trees is being planted and the boys are learning by actual work, to make thinnings in the more crowded stands. They expect to obtain their first revenue from the woods this year through the sale of cordwood removed as thinnings.

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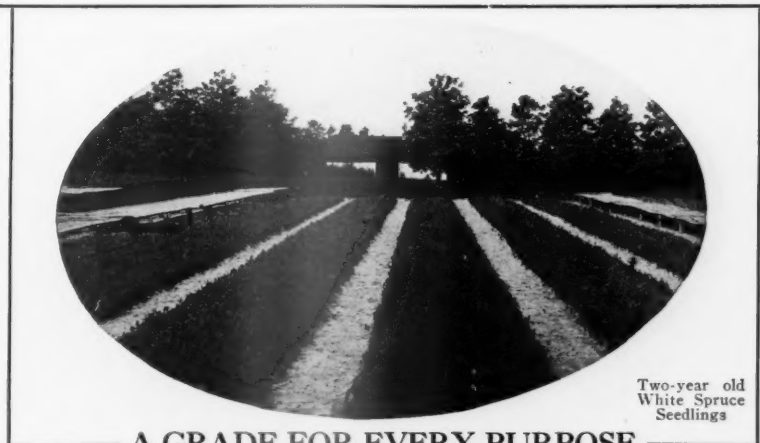
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They cannot, in the small space allotted to them, list all of their products, and Members are urged to write to them for complete catalogues.

California Forests Have Banner Business Year

Receipts from the 18 national forests of California for the fiscal year ending June 30, totaled \$1,276,245, reports the San Francisco district headquarters of the United States Forest Service. This is the largest annual revenue ever received from Federal forest resources in this state, and exceeds the receipts of the preceding fiscal year by \$289,600.

Twenty-five per cent of this total revenue, or \$319,060 will be returned to the state by the Federal Government for distribution to counties in which the National Forests are located for road and school development, and an additional ten per cent or \$127,624 will be expended by the Forest Service on road and trail construction in these counties, making a grand total of \$446,680 which will be returned to California in lieu of taxes on these federal properties.

Timber is the best paying resource of the National Forests of California and yielded a revenue of \$894,500 during the past fiscal year. Grazing holds second place with receipts totaling \$184,500, closely followed by special uses, including summer homes and other forms of recreational use, which produced a revenue of \$113,600.

National Retail Lumber Dealers Plan New Orleans Meeting

The Tenth Annual Convention of the National Retail Lumber Dealers Association will be held in New Orleans, November 9-12, with headquarters at the Roosevelt Hotel. Business sessions are scheduled for the first three days and on the 12th the Convention visitors will go by special train to Bogalusa to spend that day inspecting the sawmill, paper manufacturing plant and reforestation project of the Great Southern Lumber Company.

More States And Money For Clarke-McNary Cooperation

Twelve States that never before distributed forest planting stock to farmers are undertaking such work in the year beginning July 1, 1926, with the cooperation of the Federal Government. This year's Federal appropriation for tree distribution under the Clarke-McNary Law is \$75,000, which is one-third more than that of the fiscal year 1926; so that the large increase in the number of cooperating States, which now stands at 31 (including Porto Rico), will not compel a reduction in the amount allotted to each for this purpose. This year, for the first time, the Forest Service will assist some of the States by furnishing them with tree seeds of species needed by the State forest nurseries and hard to obtain.

The funds made available by Congress for cooperation in forest fire protection during the fiscal year 1927 have been

increased so that in that activity, likewise, the individual allotments to States will be maintained at their former level. Allotments for this purpose will go to 33 States, the latest to get on the list being Mississippi.

Remedy For The Yellow Peril

At the Third Shade Tree Conference recently held in Philadelphia there was given opportunity of observing the results of spraying with Coated Arsenate of Lead for the control of Japanese Beetle. This material has a wide range of use, but is especially adapted to shade tree work because it sticks like paint. In Japanese Beetle spraying experiments it was found that one spraying with Coated Arsenate of Lead gave protection over the entire season where two to three sprayings with ordinary Arsenate of Lead were necessary.

Honey And Forest Fires Won't Mix

The extent to which forest fires affect the production of honey will perhaps never be known. But Charles Murray of Shirley, Tennessee, claims (and logically) that when spring forest fires are numerous and severe in his neighborhood the amount of honey produced by his bees the following summer is below normal. Several stands of bees were lost in the winter after spring and summer fires because there was not enough honey to carry the insects through the cold weather. Bees gather nectar from wild flowers; when the red flames sear the forests they also destroy the flowers; result, no honey.

Cottonwood In Kansas

According to Albert Dickens, State Forester of Kansas, considerable lumber is being cut from cottonwood trees planted forty years ago. Mr. Dickens says:

"Kansas' big job is the production of food. Meat, flour, potatoes, and vegetables, dairy and poultry products, fruit and sugar, are her contributions to the world's bill of fare. And now we are shipping these products in packages made from lumber planted on her prairies 50 years ago. Kansas hens keep a number of box factories busy making crates from the quick growing cottonwood.

"Whenever a lumber famine is suggested, Kansas thinks of cottonwood. Kansas loves the cottonwood tree. Men are now cutting logs from trees that sang their lullabies 40 years ago—lullabies that had the music of the showers. There is poetry in growing trees and when the logs furnish packages that help solve the problems of marketing, it is the poetry of the harvest and not the dirge of a dying tree. A few cuttings from the young tips set in proper soil and the first line of a new poem is written."



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Wood Furnishes Fuel For Much Electric Power

Wood as a fuel for the production of electric power by public utility power plants is a factor of great importance in Oregon, according to a bulletin just issued by the Geological Survey. In that State during the month of June 18,664,000 Kilowatt hours were produced by burning wood, as against only 33,000 Kilowatt hours from other fuel sources, and 47,857,000 from water power.

In some of the forest states, notably Washington and Oregon, the showing for wood as a fuel in the production of electric power for private industries would be more impressive, as the lumber mills and other forest industries in those states frequently provide their own electric power from the combustion of sawdust, slabs, and other waste from their operations. Wood, however, is used more extensively in domestic heating than for power. Surprisingly enough about one-third, by cubic measure, of all the wood consumed in the United States goes into fuel—about as much as goes into lumber—although only a small proportion of it is suitable for lumber or other industrial uses.

New Jersey Increasing Her Forestry Income

"The income derived by salvaging and marketing material removed for the development of New Jersey's state owned forests is showing a decided increase each year," is the statement issued by State Forester C. P. Wilber.

Mr. Wilber points out that the forests acquired by the State are of a poor type as it is the function of the Forestry Division to reclaim and make profitable all undeveloped woodland. Trees are removed from time to time to prevent crowding, and unhealthy timber and timber damaged by fire are cleared out. By salvaging and marketing this waste material, New Jersey's forests are contributing toward the cost of their up-keep. The income is increasing each year.

Fire Lines Built By Machines By Stuart B. Show

All of us, when laboring on a tough piece of fire line, have prayed for the day when hand work would be obsolete. That happy day is brought measurably nearer by the success of a recent experiment on the Fruit Growers Supply Company operation in the Lassen National Forest in California.

The equipment consists of a Best 60-tractor (10-ton) and a specially constructed V-shaped drag. The drag is built of manganese steel plates, and is about five feet on the sides and three feet wide at the back. The sides are straight, about one foot high, with a solid horizontal plate at the midpoint. The top of the drag is loaded with boulders held in place by cross partitions to increase the weight.

In operation, except on very rocky ground, the drag digs a furrow some six inches deep and three feet wide. The dirt is shouldered out, forming a bank about one foot wide on each side, giving a total width of mineral soil of around five feet. Brush, reproduction, old logs up to two feet in diameter, squaw carpet, and lava boulders up to 300-400 pounds in weight are moved down or shoved aside with ease.

Something like a mile of line an hour can be built, requiring little hand work to touch up. Supervisor Durbin of the Lassen, on whose forest the experiment was made, figures that the equivalent of work done by hand would cost at least \$100. The cost by the tractor method is not over \$4.

As Bill says, at some future date we'll hold a guard meeting, stick up a McCleod tool before our guards, and wait to see who is the first to ask what that queer-looking thing is. Then some gray-headed forest officer will reply, "Well, boys, that was what we used to dig fire line with way back in 1926."

The experiment opens enormous possibilities in cheap and rapid line construction where the ground is not too steep or rocky.

A Model Forest 'Way Up In The World'

According to present plans, the Fremont field laboratory of the Rocky Mountain Forest Experiment Station, which is a forest tract of 160 acres on the side of Pike's Peak, is to be handled as a model forest.

The Forest Service will continue their experiments in cutting and planting and the study of climatic influences on timber growth here together with the demonstration of this tract as a model forest.

Preliminary plans have already been made; the area has been mapped and the timber estimated and it is planned to make this forest on the celebrated Pike's Peak a demonstration of how forest land in this region should be handled and what it can be made to produce.

North Dakota Active In Tree-Planting

The first trees from the reestablished North Dakota State forest nursery, at Bottineau, are to be planted in the form of 40 demonstration shelter belts. Extension Forester Gillett will visit the chosen sites this summer, to determine how many trees are needed at each and to make sure of proper preparation. In the demonstration work he will have the cooperation of county agents.

The Bottineau nursery is arranging to test out forest tree species for their adaptability to North Dakota conditions. Tree seeds have been brought from the Arnold Arboretum, the Brooklyn Botanical Gardens, and the Kyushu Imperial University of Japan.

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A School of Timber Marking

By H. D. Cochran

Timber marking has been one of the popular pastimes at the Forest Service field Ranger meetings held in Colorado and Wyoming this spring. A board of highbrows "marks" (in a notebook) a strip of trees all tagged and numbered and then turns loose the bunch with instructions to harvest the crop. In most of the meetings there were from 250 to 300 trees tagged in a strip so located as to include the largest possible variety of conditions. In one case these conditions graded from a badly stagnated stand in need of heavy cutting to young thrifty poles requiring only thinning.

Marking was done with earnestness alike by Rangers, Supervisors, D. O. men and Assistant Foresters. Borers (increment) and tapes worked harder than the markers. It was easy to see there was going to be a reason for everything, right or wrong.

Then would come the grading of papers—a tense moment—followed by a recheck and discussion. If the marking was earnest, this part of it was downright zealous, and at every meeting the marking board had the benefit of some real expert advice—showing their broadmindedness by changing a few. Next time we can expect better results from them too.

Says the office of Forest Management: "The noticeable thing about all the meetings was the way the men took hold. Invariably they displayed keen interest, and the manner in which they grasped the principles we are seeking to impart was mighty gratifying. I am convinced that this outdoor classroom is the most interesting to the men and is by long odds the best way in which to put across a real conception of the principles of proper forest management."

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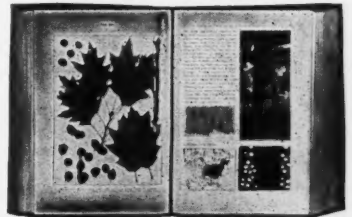


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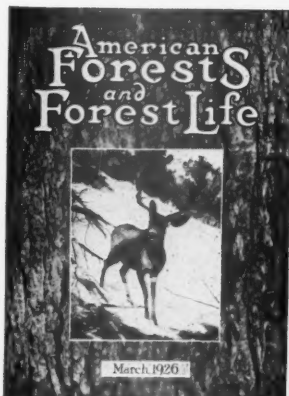
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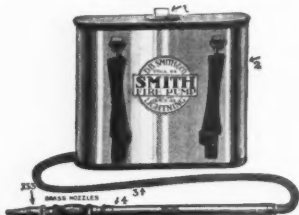
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Pennsylvania Issues Fire Prevention Instructions

For the benefit of those who recognize the danger of forest fire and appreciate its peril to their property, the Department of Forests and Waters has issued a bulletin called "How to Prevent Forest Fires" by Charles R. Meek. This pamphlet would instruct pupils in protecting woodlands from fires started by others.

The pamphlet assumes that propaganda against starting forest fires is superfluous for such readers and suggests practical methods by which the red demon will be dwarfed and ultimately made a stranger. The general methods include education of the public, arousing sentiment against incendiarism, and enlisting the cooperation of the railroads. More concrete in nature are directions for building safety strips, advice to bind the landowner by law to dispose of slash, and directions for safe brush burning.

National Forests of Northwest Take Emergency Fire Measures

Almost two and a half million acres of national forest land in Oregon and Washington have been closed this summer as an emergency forest fire measure. This was necessitated by "the extremely dry conditions starting early in the season, the large number of lightning fires, and the need for preventing man-caused forest fires."

The total area closed in Oregon is 190,680 acres and 2,246,847 in Washington. They will remain so until the end of the fire season. The forest service urges that persons planning to visit any of the National Forests in the closed areas get in touch with the local supervisor or ranger to find out the exact location of the closed areas.

High Fire Damage Among Southern Pines

One out of every four longleaf pines, and one out of every nine shortleaf, in the virgin forests of the South bear visible fire scars, according to E. L. Demmon, of the Southern Forest Experiment Station. The experiment station has recently undertaken a study of the amount and extent of fire damage to mature timber. This damage to virgin timber is a substantial portion of the tremendous fire loss in the southern forests which, in 1924, amounted to 75.5 per cent of the total fire loss in the United States, and covered 84.3 per cent of the area throughout the country burned over by forest fires.

It was found that in many instances the fire wounds in the smaller trees heal over, so that finally no scar may be visible until the tree is cut down. In these cases, however, as well as in the more obvious damage to the larger trees, the loss remains in the damage

to the butt log of the tree, the most valuable timber that the tree will yield. This loss takes several forms, such as high stumps left standing, lower portions of the butt log left lying in the woods, and later in lumber which must be discarded or degraded because of the pitch. On this account, boards that would probably otherwise grade "B" must often be thrown into No. 1 Common, and sometimes into No. 2 Common.

A Utilization Guide For Blight-Killed Chestnut

A table, prepared by the U. S. Forest Products Laboratory, lists the main uses for which blight-killed chestnut is suitable, according to the state of the wood when cut. Owners of chestnut timber would do well to consider possible markets in the order in which the products are grouped in the table. Manufacturers or users of these products should give chestnut all possible consideration, for their demands during the next fifteen years will determine how much of this valuable wood can be saved from total loss.

For a year or possibly two after death a blight-killed chestnut tree will furnish just as good wood as a live tree. If the tree is left standing longer than two years the sapwood begins to decay, but the heartwood still remains sound and suitable for a great number of sawed products. In the next state of deterioration the heartwood begins to dry out and consequently to check. Lastly, it within six years the tree is not cut and taken from the woods the heartwood becomes infected with decay which destroys its usefulness for practically all purposes except extract wood and fuel.

New Jersey Experiments With Chinese Chestnuts

Experiments are being made by the College of Agriculture of New Jersey to find a chestnut tree that will resist the fungus disease that within a few years has practically eliminated chestnuts in the United States. Last April a one-acre block of Chinese hairy chestnuts was planted at the College farm at New Brunswick and there is hope, according to reports, that the species will thrive and restore to the State this valuable chestnut timber it has lost.

Portable Sawmill Demonstrated In Connecticut

The first portable sawmill demonstration to be put on by a New England college was recently held at Storrs, Connecticut, as the feature of the forestry program which was part of the annual Farmers' Week at Connecticut Agricultural College.

The demonstration was entirely successful and was enthusiastically viewed by approximately 300 people.

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